

FCC CFR47 PART 15 SUBPART C INDUSTRY CANADA RSS-210 ISSUE 8

CERTIFICATION TEST REPORT

FOR 902-928 MHz Transceiver

MODEL NUMBER: A1101L09A and A1101L09C

FCC ID: X7J-A10091602 IC: 8975A-A10091602

REPORT NUMBER: 11U13981

REVISION ISSUE DATE: 2011-11-01

Prepared for

Anaren Microwave Inc. 6635 Kirkville Road East Syracuse, New York, 13057

Prepared by

UNDERWRITERS LABORATORIES INC. 1285 WALT WHITMAN RD. MELVILLE, NY 11747, U.S.A.

TEL: (631) 271-6200 FAX: (877) 854-3577



Revision History

DATE: 2011-11-01

Rev.	Issue Date	Revisions	Revised By
	9/22/2011	Initial Issue	Joseph Danisi
1	11/01/2011	Change description, correct typographical errors, and change low, mid, high frequency to measurement actual frequency, C63.4 change to 2009, correct IC ID number, and correct block diagram.	Joseph Danisi

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Anaren Microwave Inc.

6635 Kirkville Road

East Syracuse, New York, 13057

EUT DESCRIPTION: MODULE TRANCEIVER

MODEL: A1101L09A and A1101L09C

SERIAL NUMBER: PROTOTYPE

DATE TESTED: 2011-09-06 to 2011-09-21

APPLICABLE STANDARDS

STANDARD TEST RESULTS

CFR 47 Part 15 Subpart C

Pass

DATE: 2011-11-01

IC: 8975A-A10091602

INDUSTRY CANADA RSS-210 Issue 8 Annex 8

Pass

INDUSTRY CANADA RSS-GEN Issue 3

Pass

Underwriters Laboratories Inc. tested of the above equipment in accordance with the requirements set forth in the above standards, using test results reported in the test report documents referenced below and/or documentation furnished by the applicant. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Inc. based on interpretations of these calculations. The results show that the equipment is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation, as described by the referenced documents. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL By:

Tested By:

Name: Robert DeLisi

Title: Senior Staff Engineer

Bob Ded

UL

Name: Joseph Danisi

Title: Lead Engineering Associate

UL

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 1285 Walt Whitman Rd. Melville, NY 11747, USA.

UL Melville is accredited by NVLAP, Laboratory Code 100255-0. The full scope of accreditation can be viewed at http://ts.nist.gov/standards/scopes/1002550.htm.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Gain (dB) 36.5 dBuV + 18.7 dB/m + 0.6 dB - 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	± 3.3 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.00 dB

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Radio Transceiver Module intended high-performance connectorized radio module that incorporates a CC1101 transceiver chip in the industry's smallest package (11 x 14 x 2.5mm) it has an LGA pad footprint and industry-standard U.FL button connector receptacle, this module is designed to effortlessly integrate into a wide range of applications, including: industrial control, building automation, low-power wireless sensor networks, lighting control, and automated meter reading.

The radio module is manufactured by Texas Instruments

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Channel	Frequency	Spectrum	Attenuator and	Output	Limit	Margin
		Analyzer Reading	Cable Offset	Power		
	(MHz)	(dBm)	(dB)	(dBm)	(dBm)	(dB)
Low	902.6	10.52	0	10.52	30	-19.48
Middle	914.9	10.38	0	10.38	30	-19.62
High	927.2	10.19	0	10.19	30	-19.81

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The EUT's are Identical except A1101L09A has an integral printed antenna and A1101L09C has a U.FL connector monopole has 3dBi and PCB has 2dBi. The Radio circuits are identical in both model numbers

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was AIR FCC TEST, Ver. 0.7.

The EUT driver software installed during testing was AIR FCC TEST, Ver. 3.3.0.0.

The test utility software used during testing was AIR FCC TEST, Ver. 4.2.0.0.

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5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case orientation was determined by setting the operating frequency and the orientation positioned in the X, Y, and Z Axis results were maximized to determine the worst case orientation, which was deemed the X-Axis. Therefore, this was the orientation that the module was evaluated.

In receive mode only one channel was evaluated to show compliance

5.6 **MODIFICATIONS**

No modifications were made during testing.

5.7 **DESCRIPTION OF TEST SETUP**

SUPPORT EQUIPMENT

Channel	Frequency	Power
	(M H z)	(d B m)
L o w	9 0 2 .6	1 0 . 4 3
M id d le	9 1 4 . 9	1 0 . 2 8
H ig h	9 2 7 . 2	1 0 . 1 0

I/O CABLES

	I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks	
1	MAIN	1	CABLE	Unshielded	<3M	None	
2	USB	1	USB	Shielded	42 inches	None	

Laboratories Inc.

DATE: 2011-11-01

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TEST SETUP:

The EUT was external to the host laptop computer during the tests. Test software exercised the radio card.

The device output power levels were set as follows in the software:

FSK 1.2kb, FSK 38.4kb set for 7.0 FSK 100kb, FSK 250kb and MSK 500kb set for 11.0

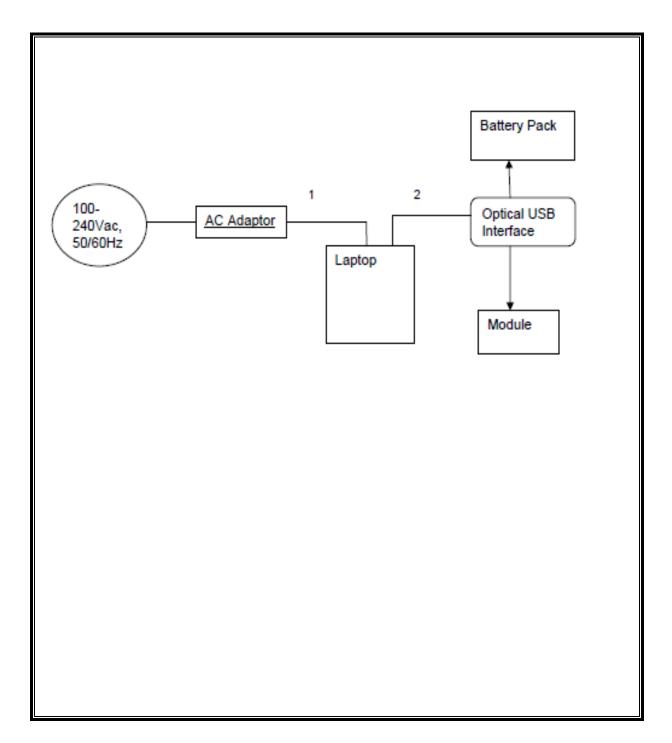
The low, mid and high channels were set as follows:

Low channel set to 4 Mid channel set to 127 High channel set to 250

The conducted bandedge for MSK 500kb required to set channel low and high channel as follows:

Low set to 5 High set to 249

SETUP DIAGRAM FOR TESTS



DATE: 2011-11-01

6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Radiated Emissions - 10 Meter Chamber

Itadiated Effissions - 10 Me	Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date	
30-1000MHz						
	Rohde &				2012-03-01	
EMI Receiver	Schwarz	ESIB40	34968	2011-03-01		
Log-P Antenna	Schaffner	UPA6109	44068		2012-04-05	
Bicon Antenna	Schaffner	VBA6106A	54	2011-04-05	2012-04-05	
		AM-1523-				
Bias Tee	Miteq	7687	44392	N/A	N/A	
Bias Tee	Miteq	AM-1523- 7687	44393	N/A	N/A	
Preamp	Miteq	AM-3A- 000110-7687	44391	N/A	N/A	
Preamp	Miteq	AM-3A- 000110-7687	44394	N/A	N/A	
Switch Driver	HP	11713A	ME7A-627	N/A	N/A	
System Controller	Sunol Sciences	SC99V	44396	N/A	N/A	
Camera Controller	Panasonic	WV-CU254	44395	N/A	N/A	
RF Switch Box	UL	1	44398	N/A	N/A	
Measurement Software	UL	Version 9.3	44740	N/A	N/A	
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-07-12	2012-07-10	
Multimeter	Fluke	83111	ME5B-305	2011-02-01	2012-02-29	
Above 1GHz (Band Optimized Sys	stem)					
	Rohde &				2012-03-01	
EMI Receiver	Schwarz	ESIB40	34968	2011-03-01		
Horn Antenna (1-2 GHz)	ETS	3161-01	51442		See * below	
Horn Antenna (2-4 GHz)	ETS	3161-02	48107	2007-09-27	See * below	
Horn Antenna (4-8 GHz)	ETS	3161-03	48106	2007-09-27	See * below	
Horn Antenna (8-12 GHz)	ETS	3160-07	8933	2007-09-27	See * below	
Signal Path Controller	HP	11713A	50250	N/A	N/A	
Gain Controller	HP	11713A	50251	N/A	N/A	
RF Switch / Preamp Fixture	UL	BOMS1	50249	N/A	N/A	
System Controller UL		BOMS2	50252	N/A	N/A	
Measurement Software	UL	Version 9.3	44740	N/A	N/A	
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-07-12	2012-07-10	
Multimeter	Fluke	83111	ME5B-305	2011-02-01	2012-02-29	

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Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date

^{* -} Note: As allowed by the calibration standard ANSI C63.4 Section 4.4.2, standard gain horns need only a one-time calibration. Only if physical damage occurs will the horn antenna require re-calibration. * Gain standard horn antennas (sometimes called standard gain horn antennas) need not be calibrated beyond that which is provided by the manufacturer unless they are damaged or deterioration is suspected, or they are used at a distance closer than 2D²/λ. Gain standard horn antennas have gains that are fixed by their dimensions and dimensional tolerances.

Test Equipment Used						
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date	
Conducted Emissions – GP 1						
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081	2011-01-27	2012-0131	
LIVII I COCIVOI	Octiwatz	9252-50-R-24-	WIESD-001	2011-01-21	2012-0131	
LISN	Solar	BNC	ME5A-636	2011-02-04	2012-02-04	
Switch Driver	HP	11713A	44397	N/A	N/A	
RF Switch Box	UL	4	44404	N/A	N/A	
Measurement Software	UL	Version 9.3	44736	N/A	N/A	
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43734	2010-03-08	2012-03-08	

Antenna Ports

Test Equipment Used						
Description Manufacturer Model Identifier Cal Date Cal D				Cal Due Date		
PSA Series Spectrum Analyzer	Aiglent	E4446A	70728	2011-02-04	2013-02-04	
Power Meter	HP	437B	71769	2011-05-17	2012-05-17	
Power Sensor	HP	8481A	71770	2011-05-17	2012-05-17	
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-07-12	2012-07-10	

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7. ANTENNA PORT TEST RESULTS

7.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

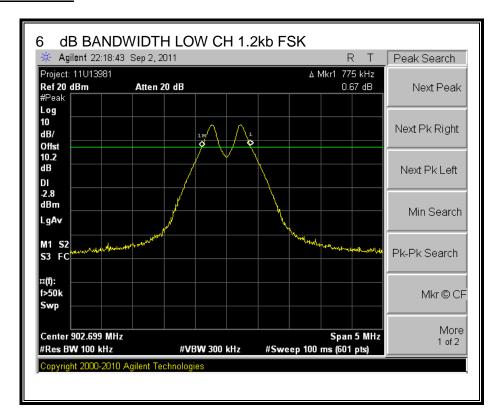
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

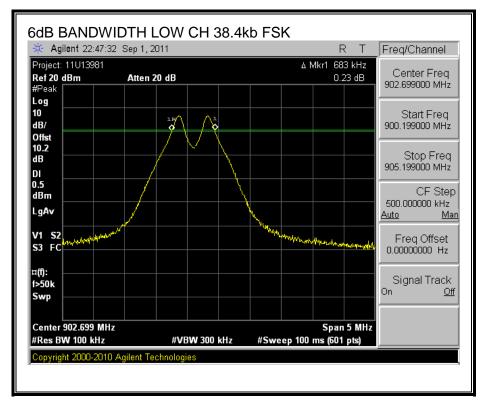
RESULTS: Results in below table are worst case measurements

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	902.6	0.583	0.5
Middle	914.9	0.575	0.5
High	927.2	0.583	0.5

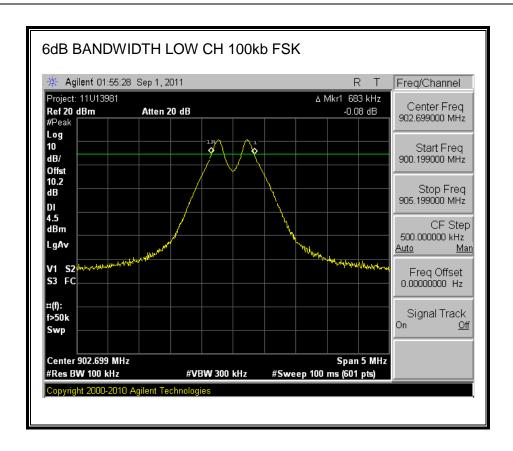
DATE: 2011-11-01

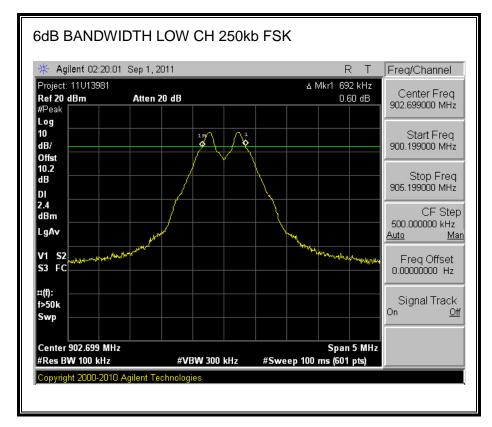
6 dB BANDWIDTH

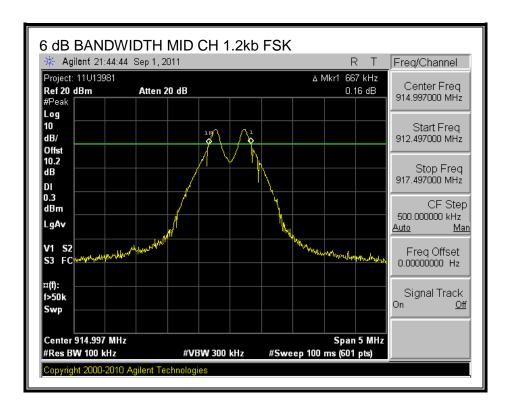


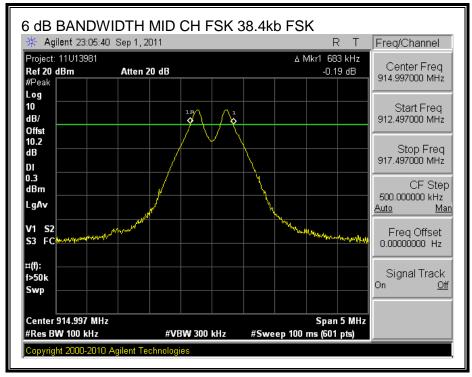


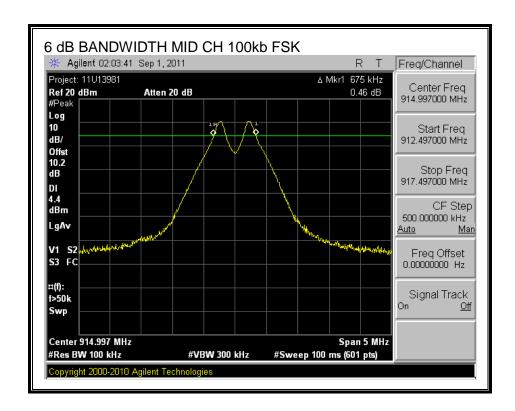
DATE: 2011-11-01

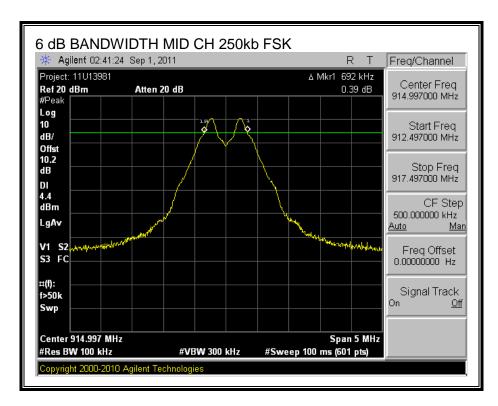


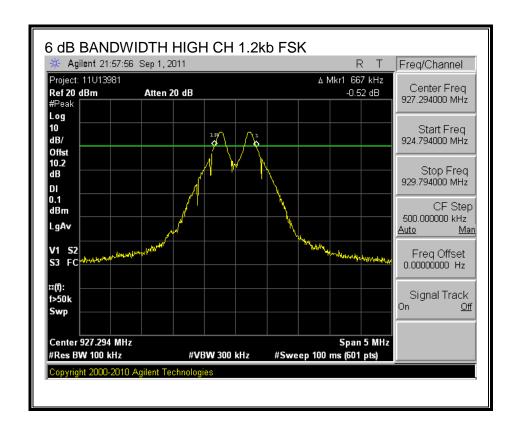


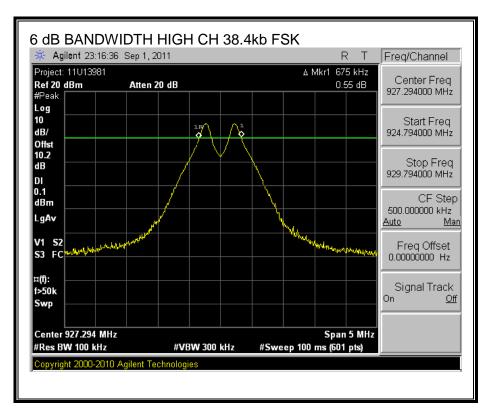


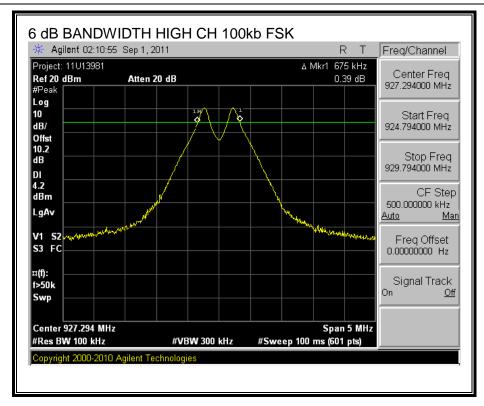


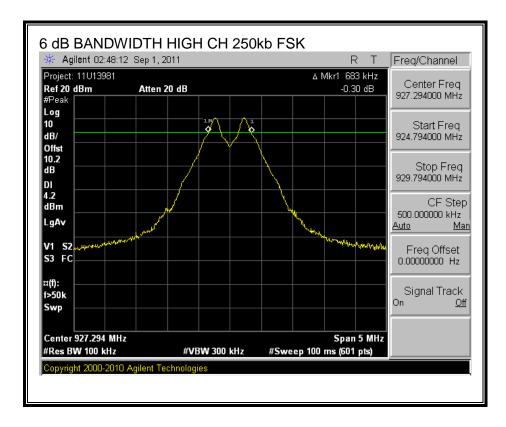


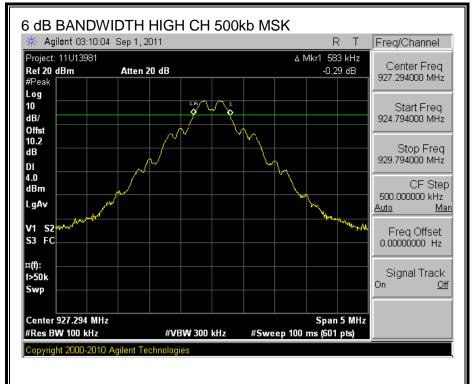












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7.2 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

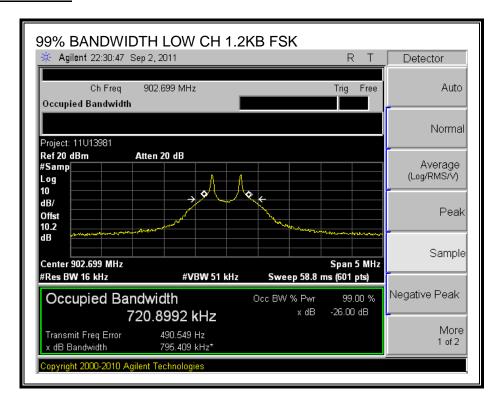
TEST PROCEDURE

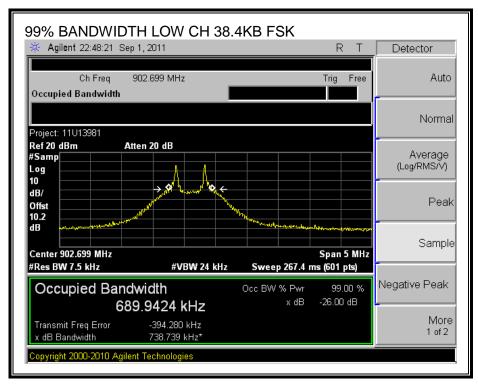
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS: The results in table below are worst case

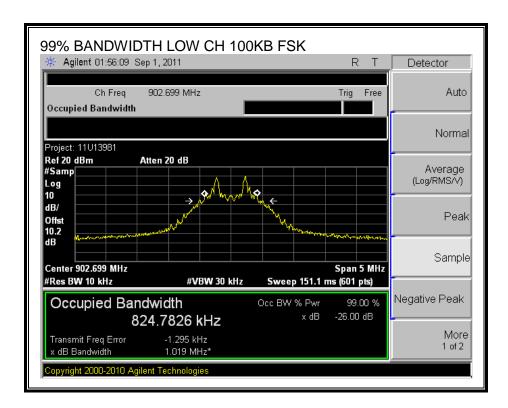
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	902.6	1.376
Middle	914.9	1.382
High	927.2	1.41

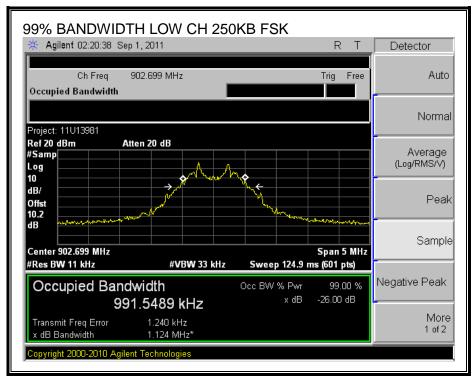
99% BANDWIDTH

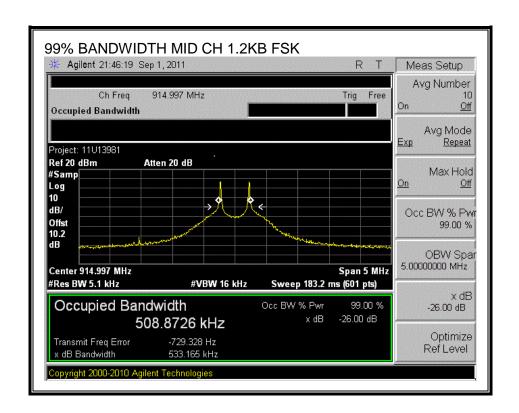


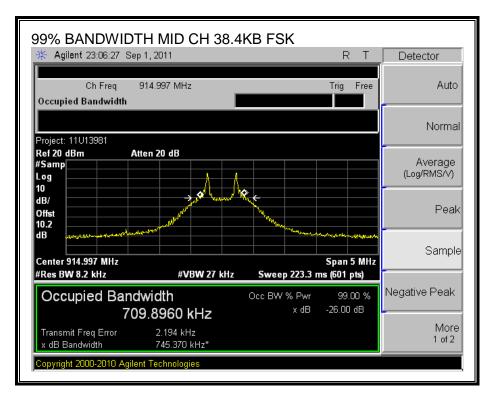


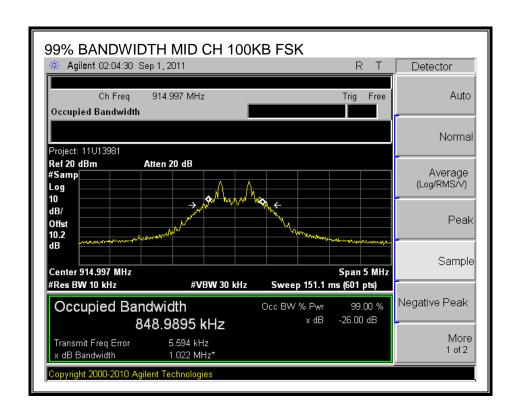
DATE: 2011-11-01

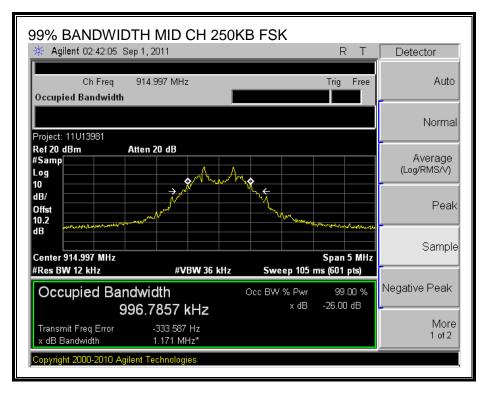












1.3819 MHz

Transmit Freq Error

x dB Bandwidth

-4.564 kHz

1.592 MHz*

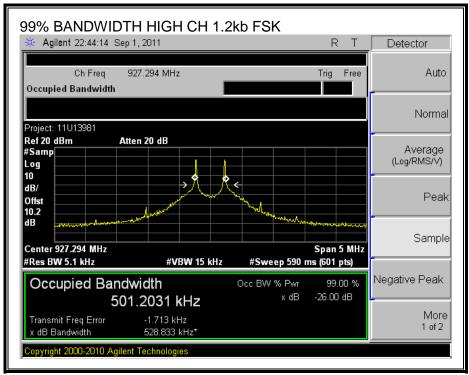
x dB

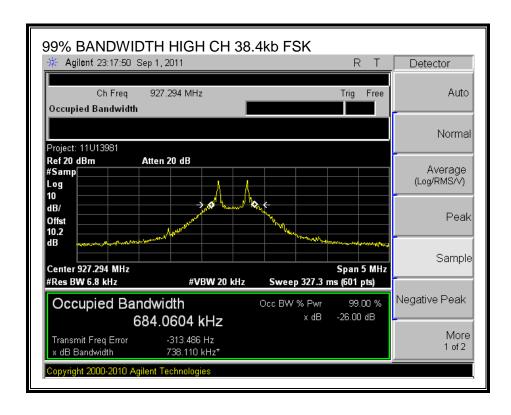
-26.00 dB

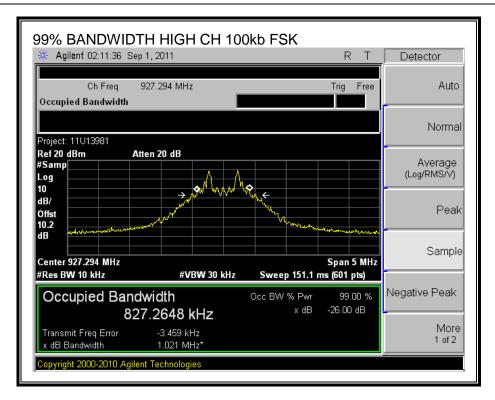
More

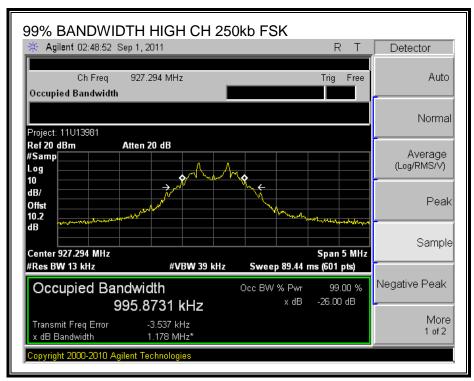
1 of 2

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7.3 OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

The maximum antenna gain is 3 dBi for other than fixed, point-to-point operations, therefore the limit is 30 dBm.

TEST PROCEDURE

Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

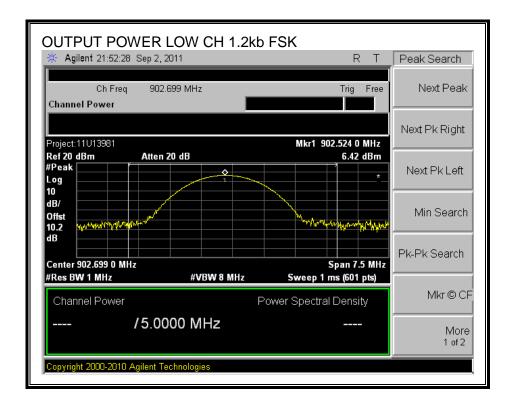
RESULTS: The results in table below are worst case.

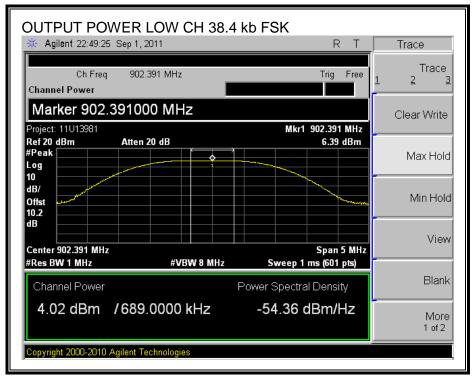
Channel	Frequency	Spectrum	Attenuator and	Output	Limit	Margin
		Analyzer Reading	Cable Offset	Power		
	(MHz)	(dBm)	(dB)	(dBm)	(dBm)	(dB)
Low	902.6	10.52	0	10.52	30	-19.48
Middle	914.9	10.38	0	10.38	30	-19.62
High	927.2	10.19	0	10.19	30	-19.81

Note: Attenuator and cable offset were included in the Spectrum Analyzer Reading.

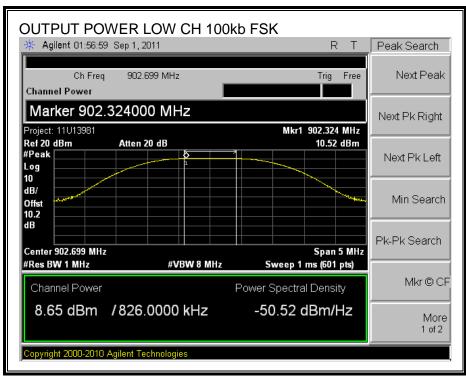
DATE: 2011-11-01

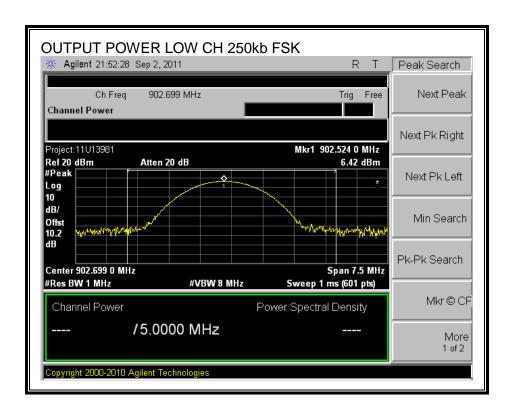
OUTPUT POWER

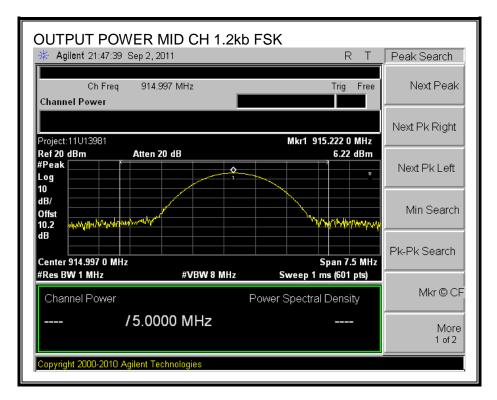


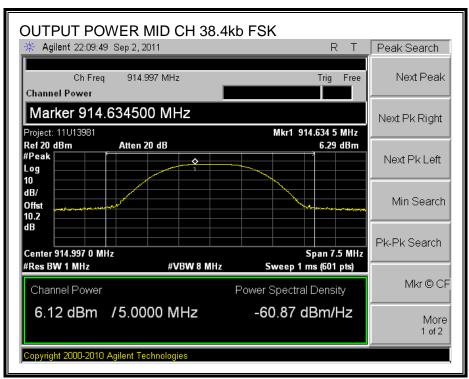


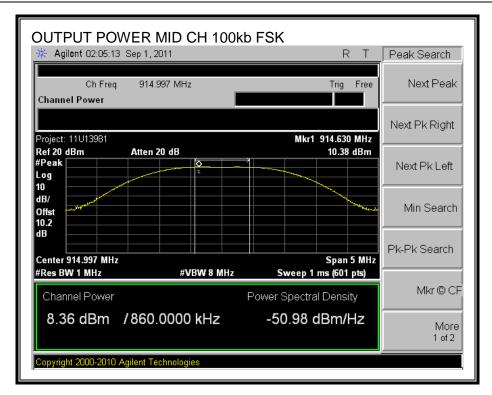
DATE: 2011-11-01

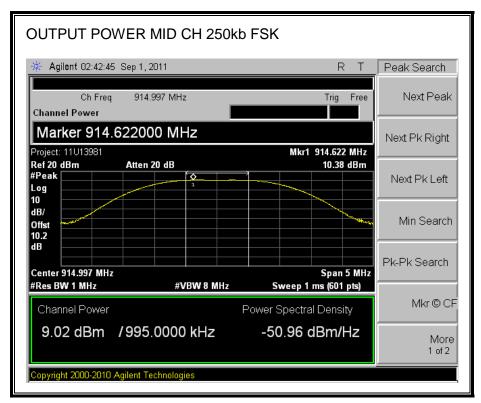




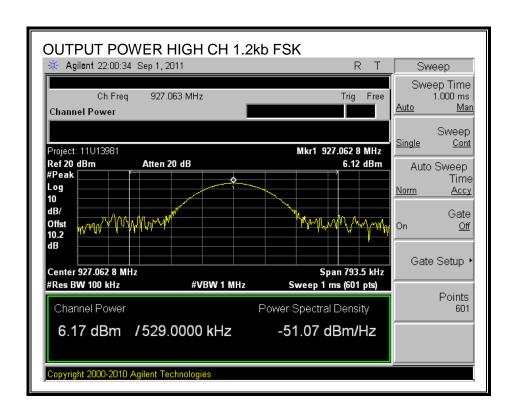


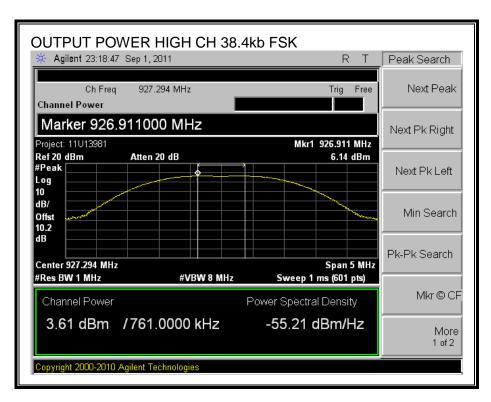


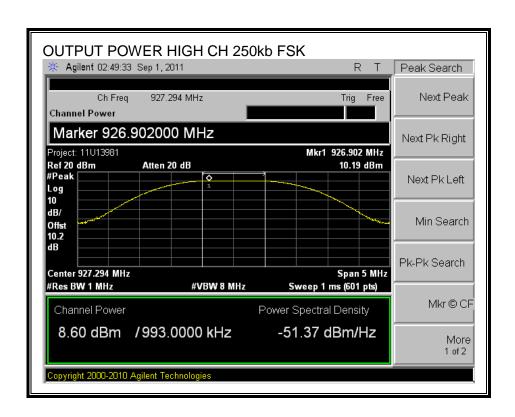




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opyright 2000-2010 Agilent Technolog

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DATE: 2011-11-01

7.4 AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS: The results in table below are worst case.

The cable assembly insertion loss of 10.2 dB (including 10 dB pad and 0.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

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Channel	Frequency	Power
	(MHz)	(dBm)
Low	902.6	10.43
Middle	914.9	10.28
High	927.2	10.10

7.5 POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

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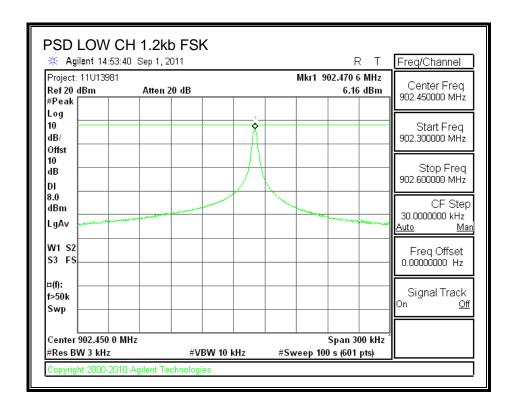
TEST PROCEDURE

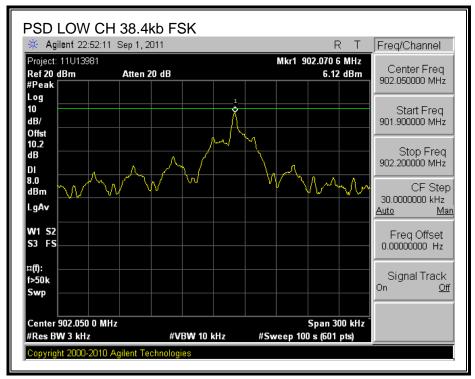
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

RESULTS: The results in table below are worst case.

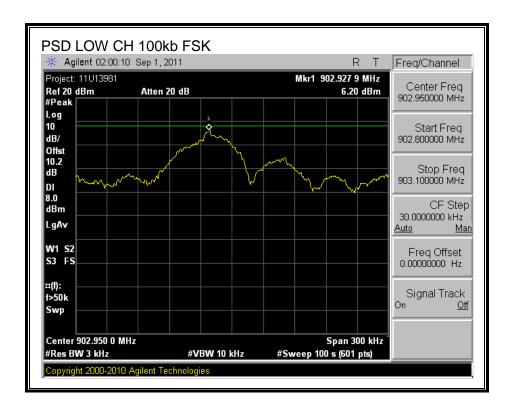
Channel	Frequency	PPSD	Limit	Margin	
	(MHz)	(dBm)	(dBm)	(dB)	
Low	902.6	6.20	8	-1.80	
Middle	914.9	6.28	8	-1.72	
High	927.2	6.11	8	-1.89	

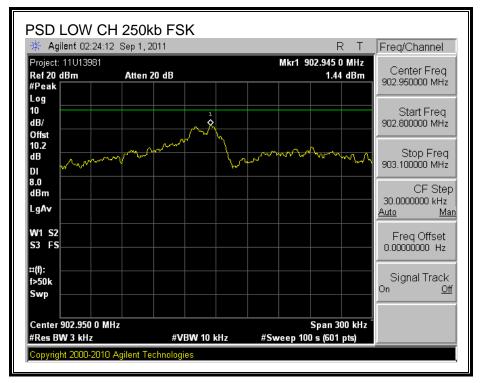
POWER SPECTRAL DENSITY

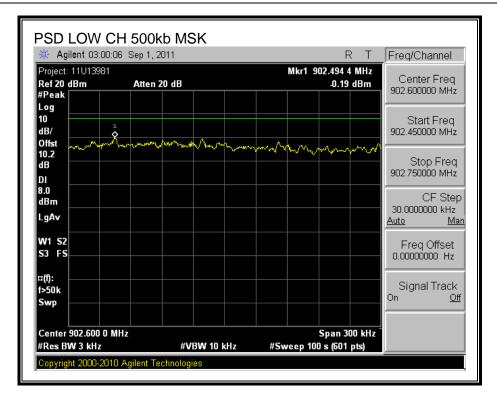


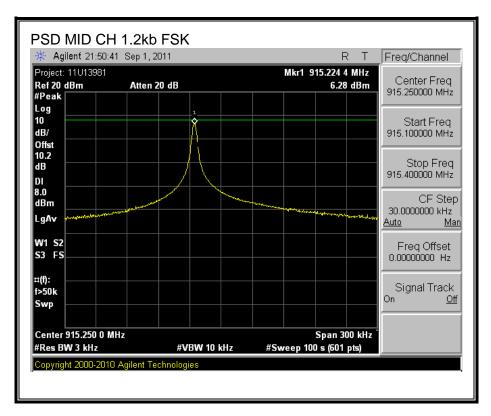


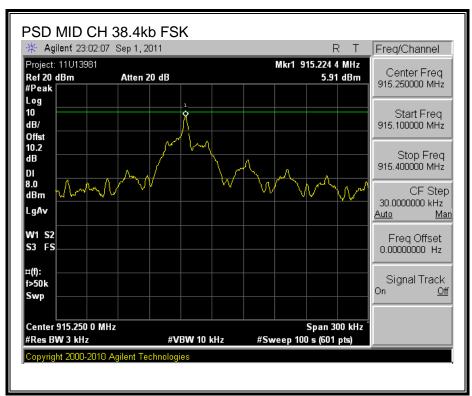
DATE: 2011-11-01

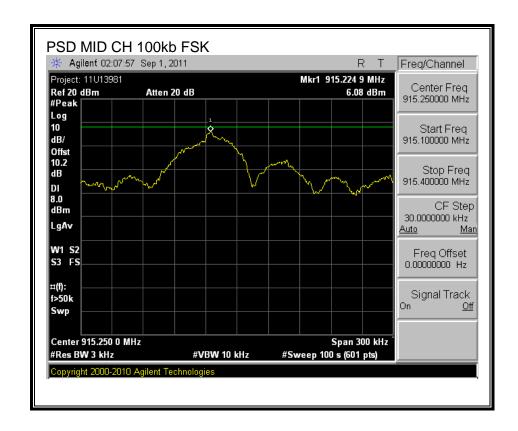


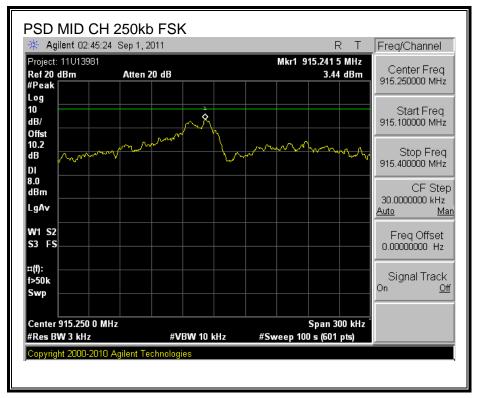


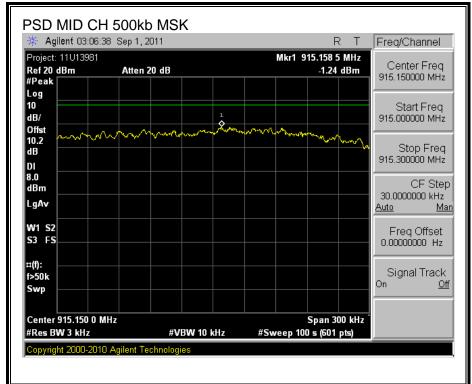


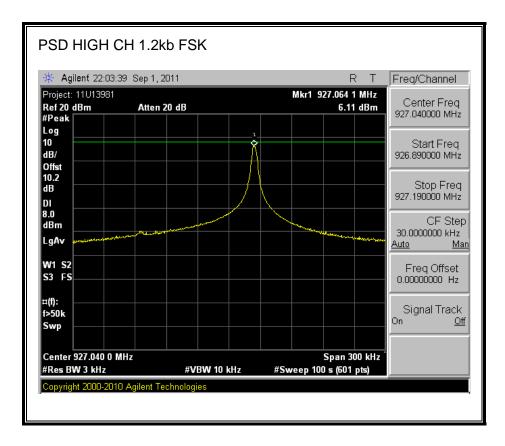


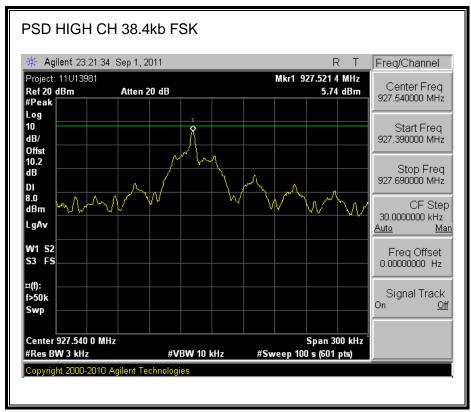


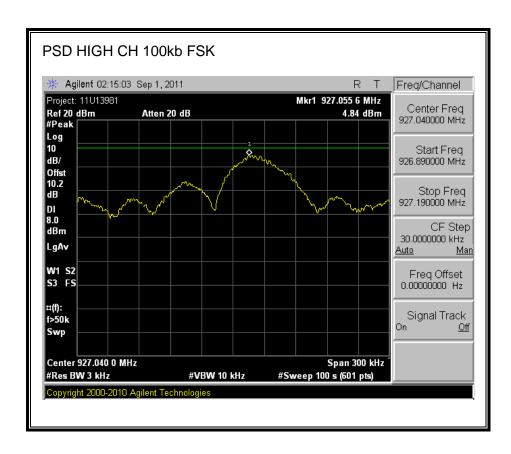


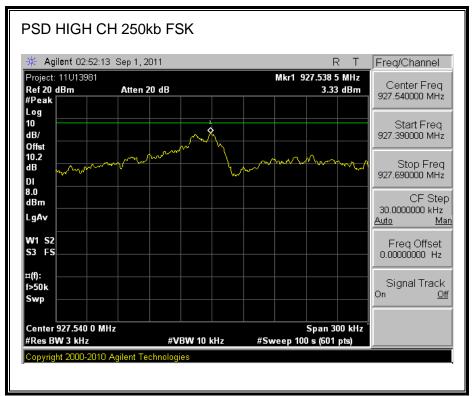












DATE: 2011-11-01

7.6 CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

DATE: 2011-11-01

IC: 8975A-A10091602

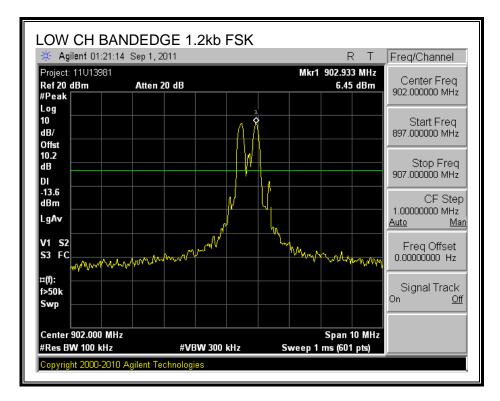
TEST PROCEDURE

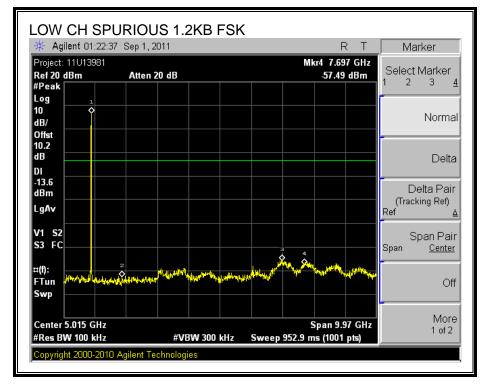
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 10 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

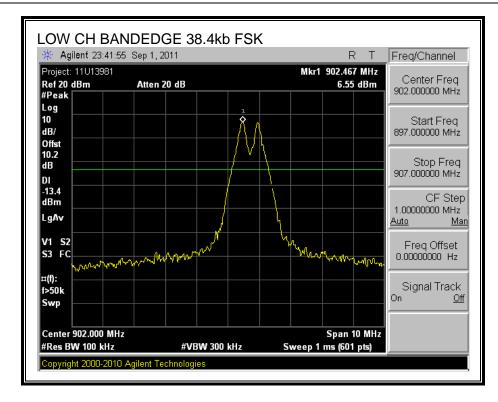
RESULTS

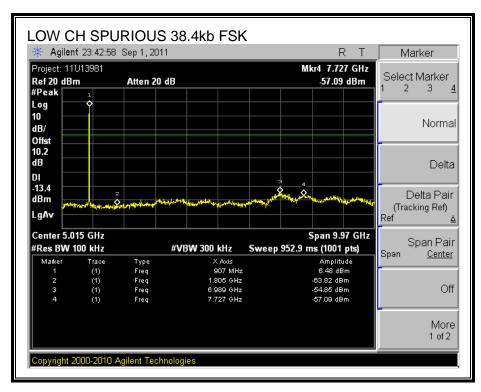
SPURIOUS EMISSIONS, LOW CHANNEL

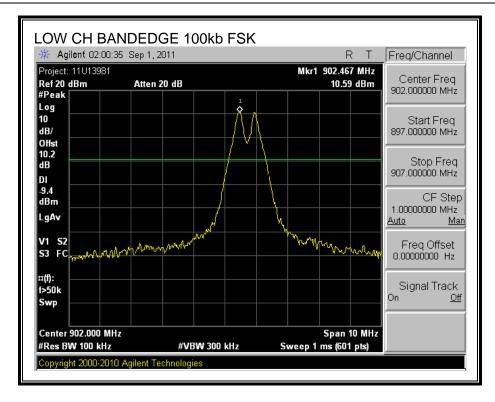


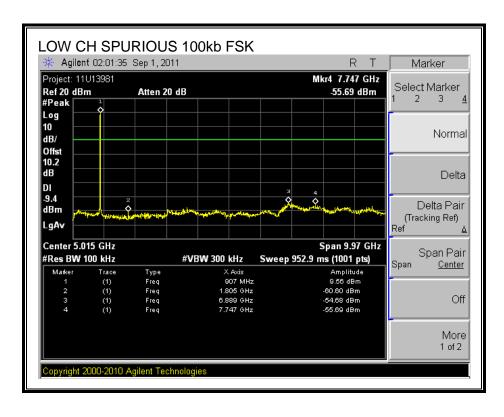


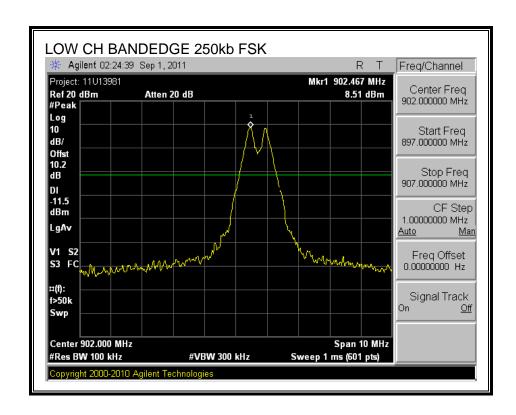
DATE: 2011-11-01

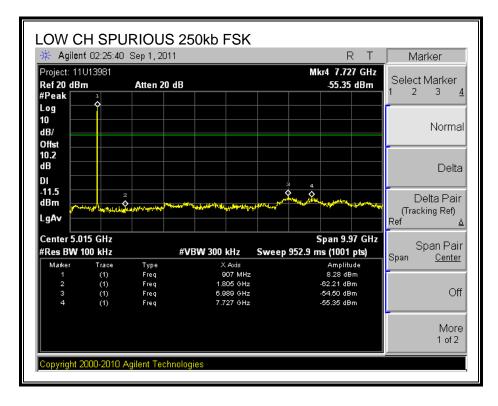


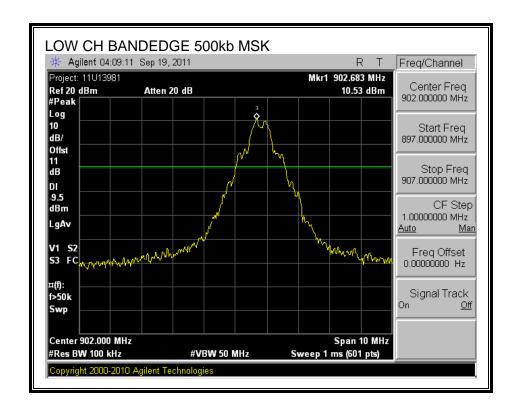


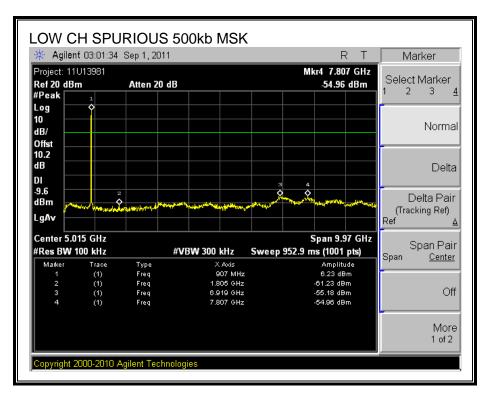




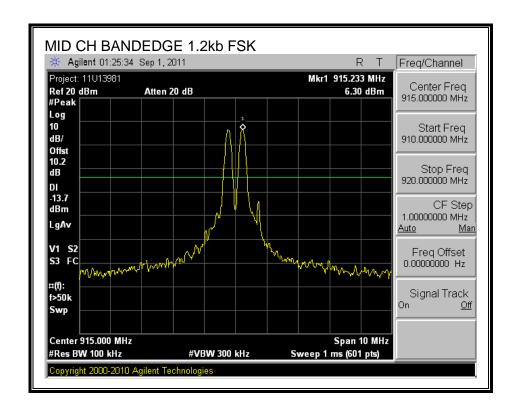


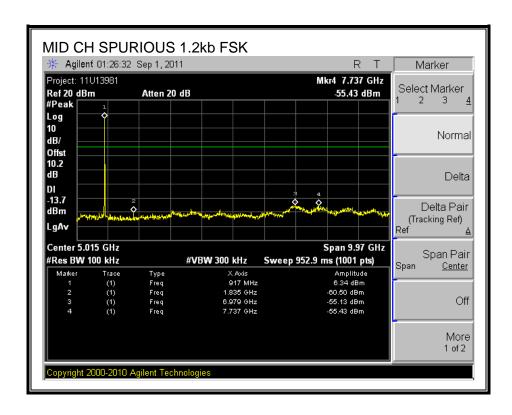




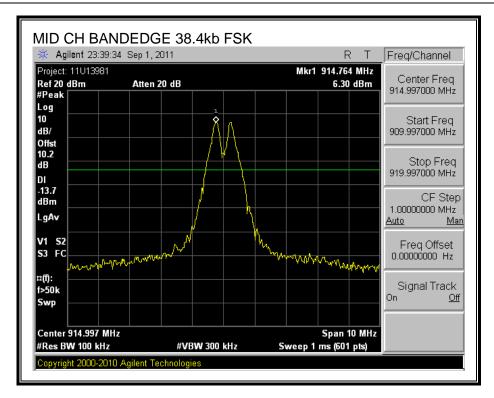


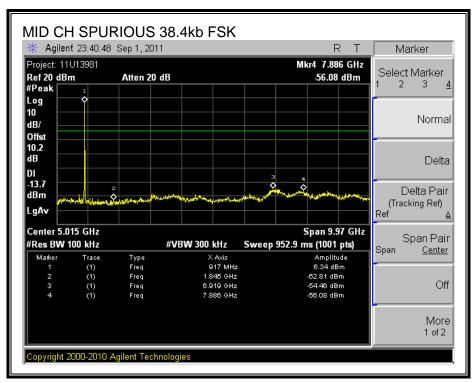
SPURIOUS EMISSIONS, MID CHANNEL

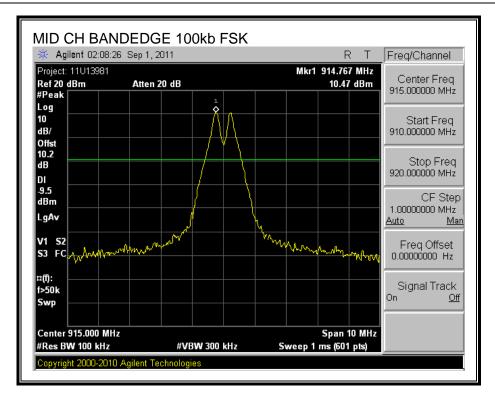


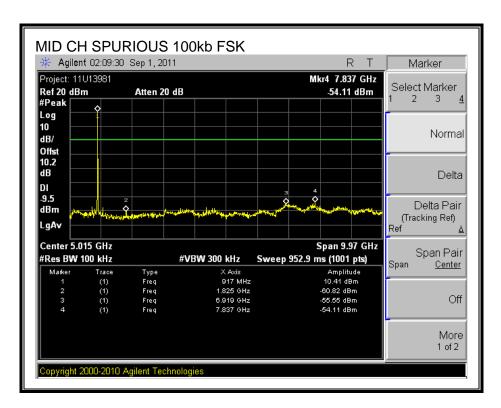


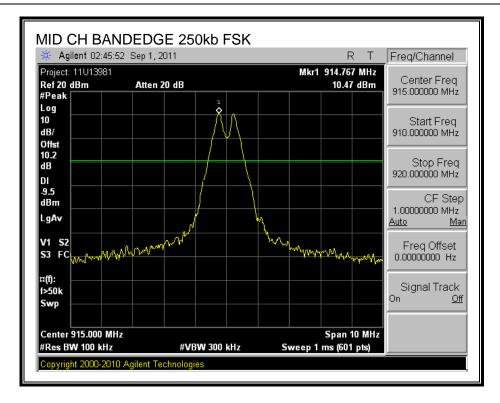
DATE: 2011-11-01

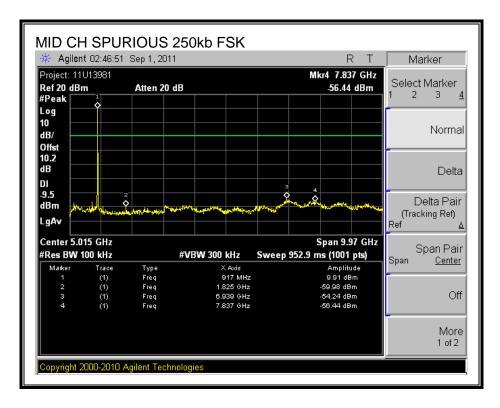


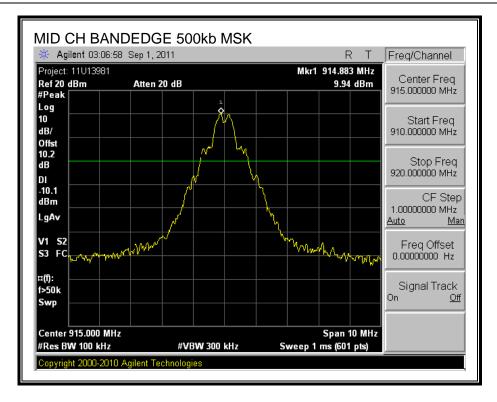


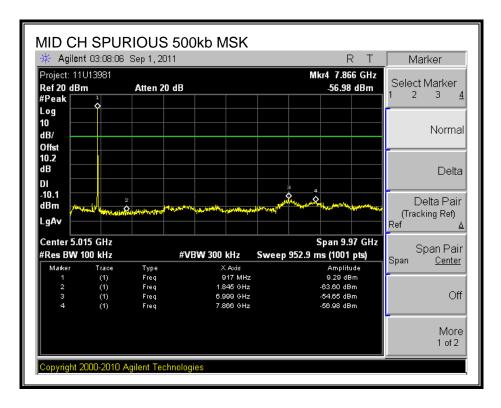




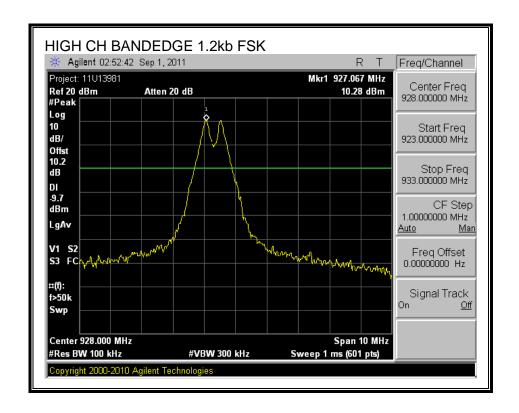


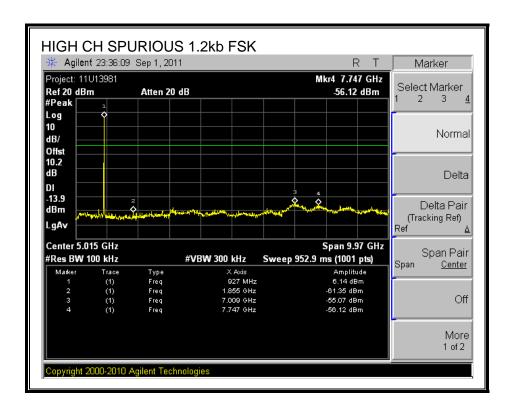




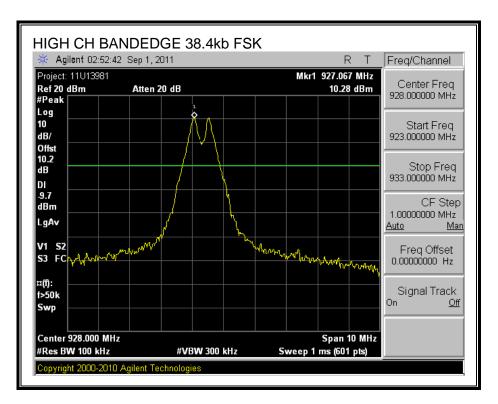


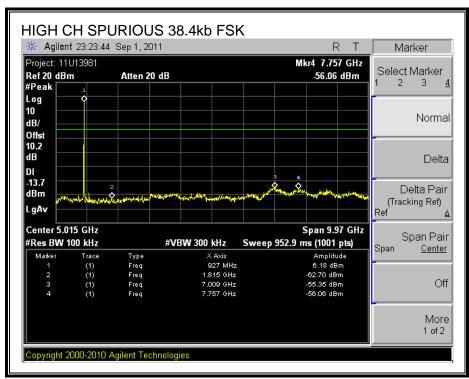
SPURIOUS EMISSIONS, HIGH CHANNEL

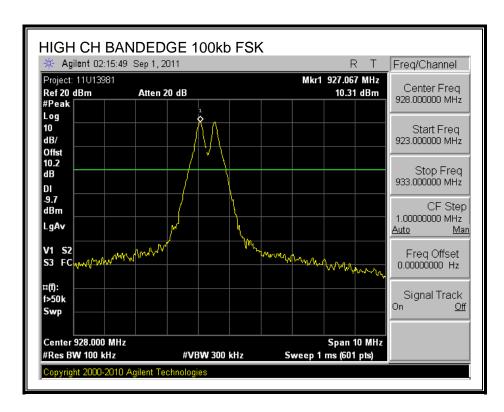


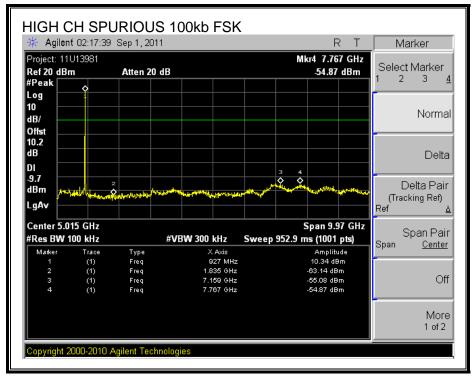


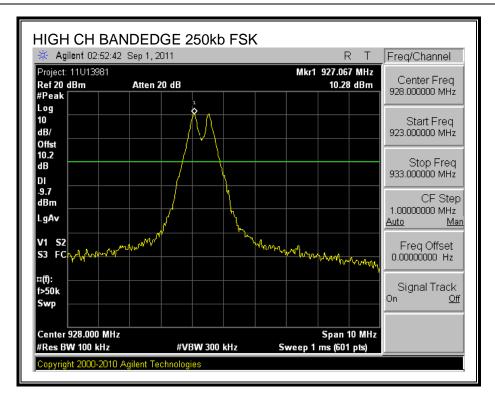
DATE: 2011-11-01

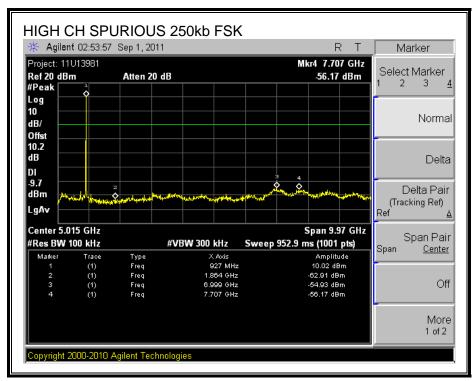


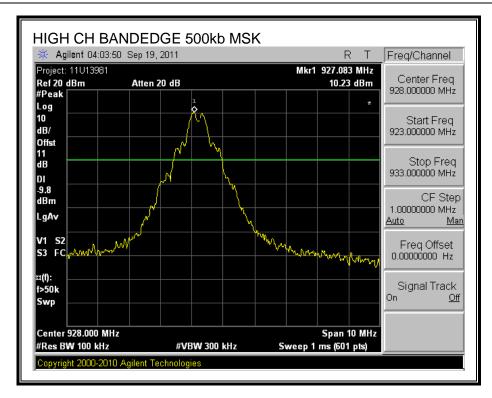


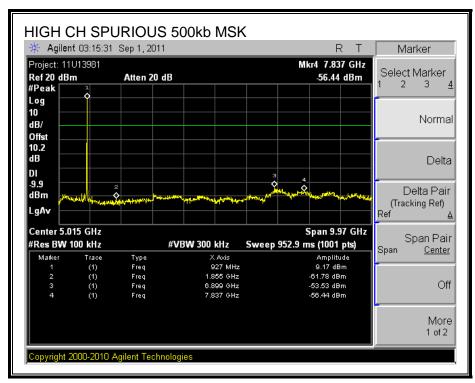












8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4:2003. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The spectrum from 30 MHz to 10 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 902-928MHz band.

The spectrum from 30 MHz to 10 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

Laboratories Inc.

DATE: 2011-11-01

REPORT NO: 11U13981 DATE: 2011-11-01 FCC ID: X7J-A10091602 IC: 8975A-A10091602

8.2 TRANSMITTER ABOVE 1 GHz

Anaren												
Module Tra	nsceiver X	MT Mode										
Model: A11	01L09C 90	02MHz										
Job: 11U13	981 USE	3 Power										
Tested By:	JD Low (Channel										
Horizontal 4	000 - 8000	ИHz										
Test Frequency	Meter Reading	Detector	3161- 03_Horz_27Sept08 [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
6886.32	37.24	LgAv	27.8	-51.75	13.29	54	-40.71	74	-60.71	72	180	Horz
7747	36.54	LgAv	28.5	-51.32	13.72	54	-40.28	74	-60.28	284	109	Horz
Vertical 4000 8000MHz Test Frequency	0 - Meter Reading	Detector	3161- 03_Vert_27Sept08 [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
6889	37.27	LgAv	27.8	-51.8	13.27	54	-40.73	74	-60.73	215	132	Vert
PK - Peak d		tor										
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												
CAV - CISPR Average detector												
RMS - RMS	detection											
CRMS - CIS	PR RMS de	etection										

REPORT NO: 11U13981 DATE: 2011-11-01 FCC ID: X7J-A10091602 IC: 8975A-A10091602

Anaren												
Module Transceiver XMT Mode												
Model: A11	01L09C 9	15MHz										
Job: 11U13	981 USE	3 Power										
Tested By:	JD Mid C	hannel										
Horizontal 4	000 - 8000	ИHz										
Test Frequency	Meter Reading	Detector	3161- 03_Horz_27Sept08 [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4576.3	51.72	LgAv	27.3	-52.46	26.56	54	-27.44	74	-47.44	154	257	Horz
6919	45.78	LgAv	27.8	-51.94	21.64	54	-32.36	74	-52.36	230	200	Horz
7837	44.77	LgAv	28.7	-50.44	23.03	54	-30.97	74	-50.97	201	313	Horz
7321.79	56.46	LgAv	28	-51.87	32.59	54	-21.41	74	-41.41	98	268	Horz
Horizontal 8	<u> </u> 000 - 10000	l)MHz										
Test Frequency	Meter Reading	Detector	3160-07_Horz_8- 12_4GHz [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
8236.96	55.78	LgAv	33.2	-50.82	38.16	54	-15.84	74	-35.84	112	176	Horz
9147.56	52.99	LgAv	33.3	-49.98	36.31	54	-17.69	74	-37.69	253	163	Horz

PK - Peak detector							
QP - Quasi-Peak detector							
LnAv - Linear Average detector							
LgAv - Log Average detector							
Av - Average detector							
CAV - CISPR Average detector							
RMS - RMS detection							
CRMS - CISPR RMS detection							

Vertical 200 4000MHz	0 -											
Test Frequency	Meter Reading	Detector	3161- 02_Vert_27Sept08 [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
2744.32	51.5	LgAv	21.3	-42.48	30.32	54	-23.68	74	-43.68	206	149	Vert
Vertical 400 8000MHz	0 -											
Test Frequency	Meter Reading	Detector	3161- 03_Vert_27Sept08 [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4573.86	51.76	LgAv	27.1	-52.51	26.35	54	-27.65	74	-47.65	194	188	Vert
7318.17	56.05	LgAv	27.9	-51.91	32.04	54	-21.96	74	-41.96	166	392	Vert
6919	45.59	LgAv	27.8	-51.94	21.45	54	-32.55	74	-52.55	172	177	Vert
7837	45.46	LgAv	29.1	-50.44	24.12	54	-29.88	74	-49.88	290	163	Vert
Vertical 800	0 - 10000M	l Hz										
Test Frequency	Meter Reading	Detector	8-12_4GHz_3160- 07_Vert [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
8236.95	49.74	LgAv	33.3	-50.82	32.22	54	-21.78	74	-41.78	349	144	Vert
9147.68	53.21	LgAv	33.3	-49.99	36.52	54	-17.48	74	-37.48	138	113	Vert
PK - Peak d	otostor											
QP - Quasi- detector												
LnAv - Linea	ar Average	detector										
LgAv - Log Av - Averagedetector	Average det ge	ector										
CAV - CISF	PR Average	detector										
RMS - RMS	detection											
CRMS - CIS	SPR RMS de	etection										

Anaren													
Module Transc	eiver XM	T Mode											
Model: A1101L	.09C 927M	lHz											
Job: 11U13981	I USB F	Power											
Tested By: JD	High Cha												
Horizontal 4000) - 8000ME	l ₇											
Tionzoniai 1000	00001111	· <u>-</u>			вом		FCC Part		FCC				
	Meter Reading	Detector	316 03_ [dB]	Horz_27Sept08		dB[uVolts/meter]	15 Subpart C 15.209	Margi	Part 15 Subpart C Peak	Margi n		Height [cm]	Polarity
4637.57	49.1	LgAv		27.3	-52.17	24.23	54	-29.77	74	-49.77	238	195	Horz
7416.49	55.65	LgAv		28.1	-51.14	32.61	54	-21.39	74	-41.39	91	335	Horz
7159	45.51				-51.45	İ		-32.04		-52.04			Horz
7767	44.96			28.5				-31.44		-51.44			Horz
Horizontal 8000				20.0									
Test Frequency	Meter			0-07_Horz_8- 4GHz [dB]	BOM S Factor [dB]		FCC Part 15 Subpart C 15.209	Margi	FCC Part 15 Subpart C Peak	Margi n		Height [cm]	Polarity
8343.585	53.66	LgAv		33.2	-51.55	35.31	54	-18.69	74	-38.69	142	112	Horz
Vertical 2000 - 4	4000MHz												
Test Frequency	Meter Reading	Detector		B 3161- D2_Vert_27Sept08 F dB] [c			FCC Part 15 Subpart C 15.209	Margi	FCC Part 15 Subpart C Peak	Margi n		Height [cm]	Polarity
2782.6	3 51.78	LgAv		21.6		30.95	54	-23.05	74	-43.05	184	168	Vert
Vertical 4000 - 8	8000MHz												
Test Frequency	Meter Reading	Detector		3161- 03_Vert_27Sep t08 [dB]	BOM S Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margi		Margi n		Height [cm]	Polarity
4635.37	7 51.59	LgAv		27	-52.21	26.38	54	-27.62	74	-47.62	183	242	Vert
7416.56	57.79	LgAv		28	-51.14	34.65	54	-19.35	74	-39.35	153	400	Vert
7159	45.26	LgAv		27.9	-51.45	21.71	54	-32.29	74	-52.29	4	179	Vert
7767	7 44.97	LgAv		28.9	-50.9	22.97	54	-31.03	74	-51.03	110	163	Vert
Vertical 8000 -	10000MHz												
Test Frequency	Meter Reading	Detector		8- 12_4GHz_316	BOM S Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15 209	Margi	FCC Part 15 Subpart C Peak	Margi n		Height	Polarity
8343.6					-51.54	1				-41.45			Vert
0343.0	50.79	LgAv		33.3	-01.54	ე ა∠.55	54	-21.45	/4	-41.45	216	314	v e rt
PK - Peak dete	PK - Peak detector												
QP - Quasi-Pea	ak detector												
LnAv - Linear A	verage det	tector											
LgAv - Log Ave	rage detec	tor											
Av - Average d	etector												
CAV - CISPR A	Average de	etector											
RMS - RMS det	MS - RMS detection												

Anaren												
PCB Transi	mitter XM	T Mode										
Model: A11	01L09A P	CB 902MHz										
Job: 11U13	981 US	SB Power										
Tested By:	AA FSK	100kB Low										
Horizontal 4	000 - 8000	OMHz										
	Meter Reading	Detector	3161- 03_Horz_27Sept 08 [dB]			FCC Part 15 Subpart C 15.209		FCC Part 15 Subpart C Peak		Azimuth [Degs]		Polarity
5417.52	58.74	LgAv	27.3	-52.65	33.39	54	-20.61	74	-40.61	288	376	Horz
6886.32	45.76	LgAv	27.8	-51.75	21.81	54	-32.19	74	-52.19	218	181	Horz
7747	44.51	LgAv	28.5	-51.32	21.69	54	-32.31	74	-52.31	114	315	Horz
Horizontal 8 Test Frequency	Meter		3160- 07_Horz_8- 12_4GHz [dB]	BOMS Factor		FCC Part 15 Subpart C 15.209		FCC Part 15 Subpart C Peak		Azimuth		Polarity
8122.167			33.1		_	54			_	284		Horz
Vertical 400	0 - 8000M	Hz										
Test Frequency	Meter Reading	Detector	3161- 03_Vert_27Sept 08 [dB]			FCC Part 15 Subpart C 15.209		FCC Part 15 Subpart C Peak		Azimuth [Degs]	Height [cm]	Polarity
5414.752	50.66	LgAv	27.5	-52.63	25.53	54	-28.47	74	-48.47	286	184	Horz
6889	45.84	LgAv	27.8	-51.8	21.84	54	-32.16	74	-52.16	157	121	Vert
7747	44.79	LgAv	28.7	-51.32	22.17	54	-31.83	74	-51.83	321	332	Vert
Vertical 800	0 - 10000N	ИНz										
	Meter Reading 52.09		8- 12_4GHz_3160- 07_Vert [dB] 33.2	[dB]	dB[uVolts/meter]			FCC Part 15 Subpart C Peak 74	Margin	Azimuth [Degs] 281	[cm]	Polarity Vert
0120.24	02.00	_ 	55.2	30.00	07.17			, ,	30.20	201	.04	
PK - Peak d	etector											
QP - Quasi-	Peak dete	ctor										
LnAv - Linea	ar Average	detector										
LgAv - Log /	Average de	etector										
Av - Averag	ge detector	•										
CAV - CISF	PR Average	e detector										
RMS - RMS	detection											
CRMS - CIS	SPR RMS	detection										

Anaren												
PCB Transn	nitter >	(MT Mode										
Model: A110	01L09A P	CB 915MHz										
Job: 11U13	981 US	SB Power										
Tested By: /	Tested By: AA FSK 100kB Mid											
Horizontal 40	000 - 800	OMHz										
				BOMS		FCC Part 15		FCC Part 15				
	Meter Reading	Detector	03_Horz_27 Sept08 [dB]		dB[uVolts/meter]	Subpart C 15.209	Margi n	Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4576.07	51.02	LgAv	27.3	-52.47	25.85	54	-28.15	74	-48.15	212	149	Horz
5417.52	58.74	LgAv	27.3	-52.65	33.39	54	-20.61	74	-40.61	288	376	Horz
5488.563	58.74	LgAv	27.5	-52.65	33.59	54	-20.41	74	-40.41	301	186	Horz
6886.32	45.76	LgAv	27.8	-51.75	21.81	54	-32.19	74	-52.19	218	181	Horz
6919	46.06	LgAv	27.8	-51.94	21.92	54	-32.08	74	-52.08	274	131	Horz
7321.75	55.66	LgAv	28	-51.88	31.78	54	-22.22	74	-42.22	241	383	Horz
7747	44.51	LgAv	28.5	-51.32	21.69	54	-32.31	74	-52.31	114	315	Horz
7837	45.67	LgAv	28.7	-50.44	23.93	54	-30.07	74	-50.07	61	100	Horz
Horizontal 80	000 - 100	DOMHz										
Test	Meter		_	Factor		FCC Part 15 Subpart C	Margi	FCC Part 15 Subpart		Azimuth		
Frequency	Reading				dB[uVolts/meter]				Margin			Polarity
8122.167	56.73	LgAv	33.1	-50.46	39.37	54	-14.63	74	-34.63	284	236	Horz

27.26

38.31

31.16

54 -26.74

54 -15.69

54 -22.84

74 -46.74

74 -35.69

74 -42.84

173

281

62

274 Horz

192 Horz

175 Horz

PK - Peak detector	
QP - Quasi-Peak dete	ctor
LnAv - Linear Average	detector
LgAv - Log Average d	etector
Av - Average detector	·
CAV - CISPR Averag	e detector
RMS - RMS detection	
CRMS - CISPR RMS	detection

44.72 LgAv

55.93 LgAv

47.84 LgAv

8126.887

8236.96

9147.56

33.1 -50.56

33.2 -50.82

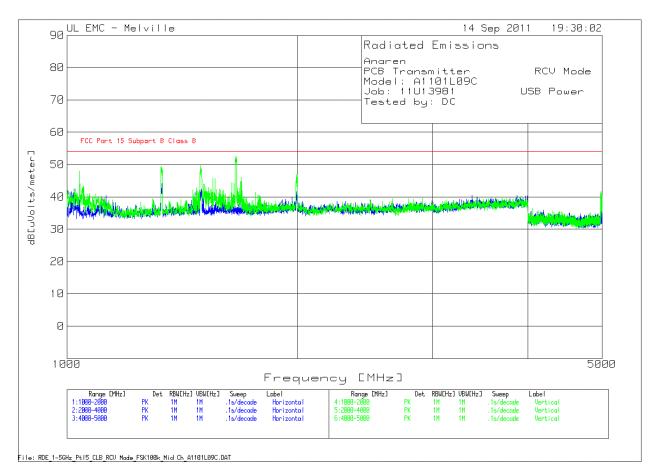
33.3 -49.98

DATE: 2011-11-01

Anaren		
PCB Transmitter XMT Mode		
Model: A1101L09A PCB 915MHz		
Job: 11U13981 USB Power		
Tested By: AA FSK 100kB Mid		

						ı				T	ı	ı
Vertical 4000	- 8000M	Hz										
	Meter Reading	Detector	03_Vert_27		dB[uVolts/meter]	FCC Part 15 Subpart C 15.209		FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]		Polarity
4576	53.53	LgAv	27.1	-52.47	28.16	54	-25.84	74	-45.84	142	143	Vert
5414.752	50.66	LgAv	27.5	-52.63	25.53	54	-28.47	74	-48.47	286	184	Horz
5491.359	60.84	LgAv	27.4	-52.64	35.6	54	-18.4	74	-38.4	180	176	Vert
6889	45.84	LgAv	27.8	-51.8	21.84	54	-32.16	74	-52.16	157	121	Vert
6919	46	LgAv	27.8	-51.94	21.86	54	-32.14	74	-52.14	242	108	Vert
7318.122	60.38	LgAv	27.9	-51.91	36.37	54	-17.63	74	-37.63	188	102	Vert
7747	44.79	LgAv	28.7	-51.32	22.17	54	-31.83	74	-51.83	321	332	Vert
7837	45.5	LgAv	29.1	-50.44	24.16	54	-29.84	74	-49.84	169	115	Vert
Vertical 8000	- 10000ľ	MHz										
	Meter Reading	Detector	4GHz_3160-		dB[uVolts/meter]	FCC Part 15 Subpart C 15.209		FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]		Polarity
8125.9	45.13	LgAv	33.2	-50.54	27.79	54	-26.21	74	-46.21	225	184\	/ert
8126.24	52.09	LgAv	33.2	-50.55	34.74	54	-19.26	74	-39.26	281	164\	/ert
8236.916	52.32	LgAv	33.3	-50.81	34.81	54	-19.19	74	-39.19	41	124\	/ert
9147.68	47.48	LgAv	33.3	-49.99	30.79	54	-23.21	74	-43.21	323	127\	/ert
PK - Peak de	tector											
QP - Quasi-P	eak dete	ctor										
LnAv - Linea	r Average	edetector										
LgAv - Log A	verage d	etector										
Av - Average	e detecto	r										
CAV - CISPI	R Averag	e detector										
RMS - RMS	detection											
CRMS - CISI	PR RMS	detection										

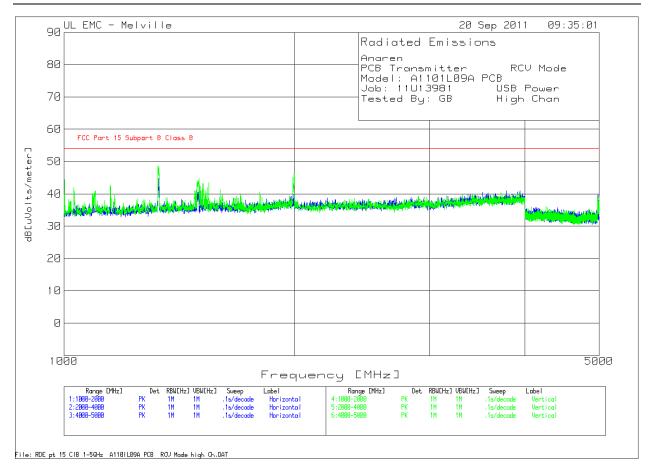
RECEIVE ABOVE 1 GHz



DATE: 2011-11-01

Anaren										
PCB Transr	mitter F	RCV Mode								
Model: A110	01L09C									
Job: 11U13	981 U	SB Power								
Tested by: [DC									
Horizontal 10	000 - 2000N	ИHz								
Test Frequency	Meter Reading	Detector	51442 1-2GHz [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart B Class B	Margin	Azimuth [Degs]	Height [cm]	Polarity
1330.835	67.98	PK	20.6	-44.43	44.15	54	-9.85	28	214	Horz
1499.75	66	PK	20.8	-44.33	42.47	54	-11.53	104	214	Horz
1990.505	64.02	PK	22.1	-43.7	42.42	54	-11.58	308	214	Horz
Horizontal 20	000 - 4000N	ИНz								
Test Meter Frequency Reading Detecto			3161- 02_Horz_27Sept08 [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart B Class B	Margin	Azimuth [Degs]	Height [cm]	Polarity
3382.309	requency Reading Detect		22.1	-41.79	40.42	54	-13.58	6	99	Horz
Vertical 1000	0 - 2000MH	z								
Test Frequency	Meter Reading	Detector	51442 1-2GHz [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart B Class B	Margin	Azimuth [Degs]	Height [cm]	Polarity
1038.981	73.02	PK	19.6	-44.6	48.02	54	-5.98	284	214	Vert
1328.836	73.18	PK	20.6	-44.41	49.37	54	-4.63	232	99	Vert
1493.753	73.18	PK	20.8	-44.32	49.66	54	-4.34	309	214	Vert
1561.719	68.78	PK	21	-44.18	45.6	54	-8.4	284	214	Vert
1664.168	75.85	PK	20.9	-44.18	52.57	54	-1.43	284	214	Vert
1690.655	69.44	PK	20.7	-44.24	45.9	54	-8.1	309	214	Vert
1994.503	68.42	PK	22.2	-43.65	46.97	54	-7.03	309	214	Vert
Vertical 4000	0 - 5000MH	Z								
Test Frequency			3161- 03_Vert_27Sept08 [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart B Class B	Margin	Azimuth [Degs]	Height [cm]	Polarity
4980.013	66.66	PK	27.4	-52.33	41.73	54	-12.27	306	214	Vert
PK - Peak de	etector									
QP - Quasi-Peak detector										
LnAv - Linea	LnAv - Linear Average detector									
LgAv - Log A	Average det	ector								

Anaren										
PCB Transr	mitter F	RCV Mode								
Model: A11	01L09C									
Job: 11U13	981 US	SB Power								
Tested by: I	DC F	SK 100k	<u> </u>							
Vertical 1000 - 2000MHz										
Vertical 100	0 - 2000MH	Z								
Test Frequency	Meter Reading	Detector	51442 1-2GHz [dB]	BOMS Factor [dB]	dB[uVolts/meter]	FCC Part 15 Subpart B Class B	Margin	Azimuth [Degs]	Height [cm]	Polarity
1039.341			19.6	-44.59	25.68	54	-28.32	306	236	Vert
1328.456			20.6	-44.41	27	54	-27	306	236	Vert
1495.108	51.07	LgAv	20.8	-44.32	27.55	54	-26.45	306	236	Vert
1663.588	50.39	LgAv	20.9	-44.17	27.12	54	-26.88	288	333	Vert
1328.081	51.14	LgAv	20.6	-44.42	27.32	54	-26.68	288	333	Vert
1494.225	54	LgAv	20.8	-44.32	30.48	54	-23.52	269	207	Vert
PK - Peak d	etector									
QP - Quasi-l		nr								
	LnAv - Linear Average detector LgAv - Log Average detector									
	Av - Average detector									
CAV - CISPR Average detector										
	RMS - RMS detection									
CRMS - CIS	PR RMS de	etection								

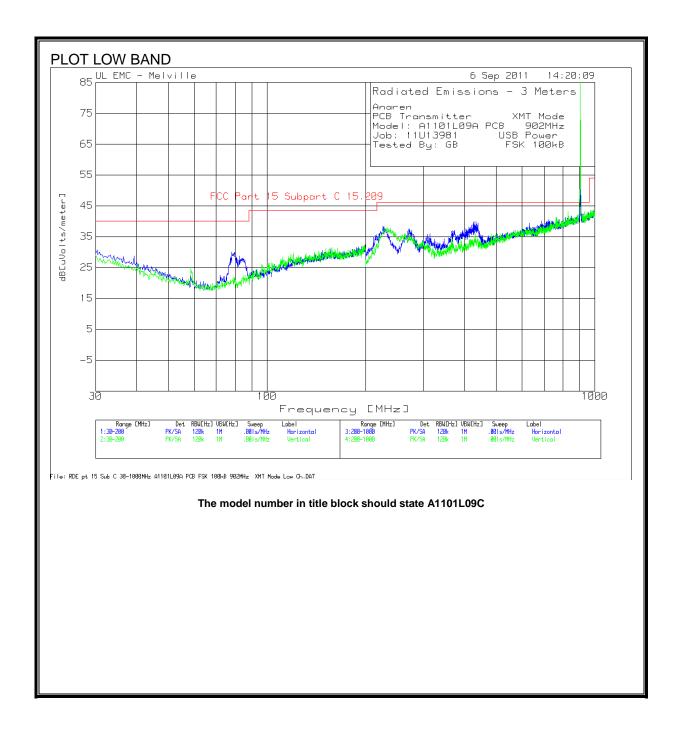


Anaren												
PCB Trans	smitter	RCV										
Mode												
Model: A1	101L09A	PCB										
Job: 11U1	3981	USB										
Power												
Tested By	: GB I	High										
Chan												
Vertical 10	00 - 2000)MHZ										
			51442 1-			FCC Dow 45						
Test	Meter			BOMS Factor		FCC Part 15 Subpart B			Azimuth	Loight		
Frequency		Detector			dB[uVolts/meter		Mar					arity
1001.499				-44.66				.59			Ver	•
1149.425				-44.42		<u> </u>	4 -11.				_	
1327.336				-44.43	+			28			Ver	
1500.25				-44.32		†		.26			Ver	
1545.727	66.62		21				4 -10.		305		1	
2000			22.2					.79			1	
2000	07.01	ГК	22.2	-43.0	40.21	J.	+ -/.	.13	213	213	V CI	
PK - Peak	detector											
QP - Quas		ector										
LnAv - Line			r									
LgAv - Log												
Av - Avera												
CAV - CIS												
detector		-										
RMS - RMS	S detectio	n										
CRMS - CI	SPR RMS	detection	1									

Anaren										
PCB Tran Mode	smitter R	CV								
Model: A1	101L09A	PCB								
Job: 11U1	3981 US	B Power	•							
Tested By	: GB Hi	gh Chan								
Vertical 10	/ertical 1000 - 2000MHz									
Test	Meter		1 -	BOMS Factor		FCC Part 15 Subpart B		Azimuth	Height	
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	Class B	Margin	[Degs]		Polarity
1330.4	54.21	LgAv	20.6	-44.43	30.38	54	-23.62	225	106	Vert
PK - Peak	detector									
QP - Quas	i-Peak de	etector								
LnAv - Line detector	ear Avera	age								
LgAv - Log detector	Average	9								
Av - Avera	v - Average detector									
CAV - CISPR Average detector										
RMS - RM	RMS - RMS detection									
CRMS - Cl detection	CRMS - CISPR RMS									

WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



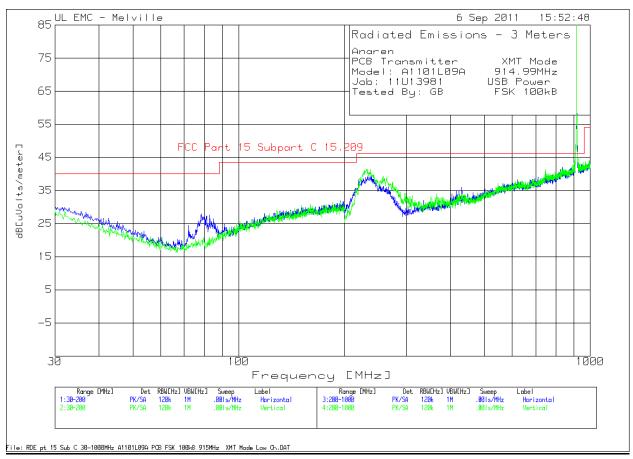
DATA LOW BAND

A											\neg
Anaren	:	T NA! -									\dashv
PCB Transm		T Mode									
Model: A110			2MHz I								
Job: 11U139	81 USB	Power									
Tested By: G	В	Γ									
Horizontal 30	- 200MHz										
Test Frequency	Meter Reading	Detector	3M Bicon 54 Horz 05Apr12 [dB]	02Feb12	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209		Azimuth [Degs]	Height [cm]	Polarit	y
78.1582	22.23	PK	6.9	0.9	30.03	40	-9.97	17	400	Horz	
Horizontal 20	0 - 1000MF	lz									
Test Frequency	Meter Reading	Detector	Horz 44067	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209		Azimuth [Degs]	Height [cm]	Polarit	y
225.6128	<i>,</i>		11.8	1.6	38.34	46	-7.66	180	100	Horz	
271.6358	22.3	PK	13.5	1.7	37.5	46	-8.5	249	100	Horz	
372.4862	19.21	PK	15.7	2.1	37.01	46	-8.99	282	100	Horz	
847.924	14.98	PK	23.2	3.4	41.58	46	-4.42	358	200	Horz	
925.1626	15.28	PK	23.5	3.5	42.28	46	-3.72	358	300	Horz	
Vertical 200 -	1000MHz										
	Meter Reading	Detector	Vert 44067	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209		Azimuth [Degs]	Height [cm]	Polarit	у
829.5148	16.77	PK	23.1	3.3	43.17	46	-2.83	359	100	Vert	
933.1666	14.34	PK	23.5	3.5	41.34	46	-4.66	11	400	Vert	
PK - Peak											
QP - Quas	i-Peak de	tector									
LnAv - Line	ear Averaç	ge detecto	r								
LgAv - Log	Average	detector									
Av - Avera											
CAV - CIS detector	PR Avera	ige									
RMS - RM	S detectio	n									
CRMS - CI	SPR RMS	detection	n								

DATE: 2011-11-01

A									Į.	
Anaren										
PCB Transm	itter XM	T Mode								
Model: A110	1L09C Mor	nopole 902	2MHz							
Job: 11U139	81 USB	Power								
Tested By: G	BB									
Horizontal 20	0 - 1000MH	lz								
	Meter		Horz 44067 02May12	3MLoc 30- 1000MHz 02Feb12		FCC Part 15 Subpart C			Height	
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	15.209	Margin	[Degs]	[cm]	Polarity
847	8.99	QP	23.3	3.4	35.69	46	-10.31	0	125	Horz
925	9.54	QP	23.5	3.5	36.54	46	-9.46	33	182	Horz
Vertical 200	1000MLI-									
	Meter	Detector	Vert 44067	3MLoc 30- 1000MHz 02Feb12 [dB]		FCC Part 15 Subpart C 15.209			Height [cm]	Polarity
829.5	8.89	QP	23.1	3.3	35.29	46	-10.71	111	384	Vert
933.1	9.82	QP	23.5	3.5	36.82	46	-9.18	0	100	Vert

PK - Peak detector					
QP - Quasi-Peak detect	or				
LnAv - Linear Average of	letector				
LgAv - Log Average det	ector				
Av - Average detector					
CAV - CISPR Average	detector				
RMS - RMS detection					
CRMS - CISPR RMS de	tection				



The model number in the title block should state a1101L09C

REPORT NO: 11U13981	DATE: 2011-11-01
FCC ID: X7J-A10091602	IC: 8975A-A10091602

78.3283 20.15 PK 6.9 0.9 27.95 40 -12.05 343 200 Horz Horizontal 200 - 1000MHz LogP 3M 3MLoc FCC Part 15 Subpart Subpart C Azimuth Height Test Meter 02May12 02Feb12 C Azimuth Height Frequency Reading Detector [dB] [dB] dB[uVolts/meter] 15.209 Margin [Degs] [cm] Polarity 238.4192 25.98 PK 12.2 1.6 39.78 46 -6.22 292 100 Horz		1	1	ı	ı	T	1	1	1	T	
Model: A1101L09C Monopole 914.99MHz	Anaren										
Tested By: GB FSK 100kB	PCB Trans	mitter XI	MT Mode								
Tested By: GB FSK 100kB Horizontal 30 - 200MHz Horizontal 30 - 200MHz Subpart C	Model: A11	01L09C M	onopole 914	4.99MHz							
Horizontal 30 - 200MHz	Job: 11U13	981 US	B Power								
3M 3MLoc Bicon 54 Horz 1000MHz C Subpart C Azimuth Height Frequency Reading Detector GB] GB] GB[uVolts/meter] 15.209 Margin GB] FCC Azimuth Height Height Frequency Reading Detector GB] GB] GB[uVolts/meter] 15.209 Margin GB] FCC Azimuth Height FCC GB] FCC GB] GB[uVolts/meter] 15.209 Margin GB] FCC GB] GB] GB[uVolts/meter] 15.209 Margin GB] GB] GB] GB[uVolts/meter] 15.209 Margin GB] GB] GB] GB] GB[uVolts/meter] 15.209 Margin GB]	Tested By: GB FSK 100kB										
3M 3MLoc Bicon 54 Horz 1000MHz C Subpart C Azimuth Height Frequency Reading Detector GB] GB] GB[uVolts/meter] 15.209 Margin GB] FCC Azimuth Height Height Frequency Reading Detector GB] GB] GB[uVolts/meter] 15.209 Margin GB] FCC Azimuth Height FCC GB] FCC GB] GB[uVolts/meter] 15.209 Margin GB] FCC GB] GB] GB[uVolts/meter] 15.209 Margin GB] GB] GB] GB[uVolts/meter] 15.209 Margin GB] GB] GB] GB] GB[uVolts/meter] 15.209 Margin GB]											
Bicon 54 Horz 1000MHz Subpart C Azimuth Height Frequency Reading Detector [dB] [dB] dB[uVolts/meter] 15.209 Margin [Degs] [cm] Polarity Po	Horizontal 30 - 200MHz										
Horizontal 200 - 1000MHz	Test Meter		Bicon 54 Horz 05Apr12	30- 1000MHz 02Feb12	dB[uVolts/meter]	Part 15 Subpart C	Margin			Polarity	
LogP 3M Horz 3MLoc Horz FCC Part 15 Subpart C C Azimuth Height Frequency Azimuth Height Reading Height Detector FCC Part 15 Subpart C C Horz Azimuth Height Reading Azimuth Height Reading Frequency Frequency Reading Detector [dB] dB[uVolts/meter] 15.209 Margin Margin [Degs] [cm] Polarity 238.4192 25.98 PK 12.2 1.6 39.78 46 -6.22 292 100 Horz	78.3283	20.15	PK	6.9	0.9	27.95	40	-12.05	343	200	Horz
LogP 3M Horz 3MLoc Horz FCC Part 15 Subpart C C Azimuth Height Frequency Azimuth Height Reading Height Detector FCC Part 15 Subpart C C Horz Azimuth Height Reading Azimuth Height Reading Frequency Frequency Reading Detector [dB] dB[uVolts/meter] 15.209 Margin Margin [Degs] [cm] Polarity 238.4192 25.98 PK 12.2 1.6 39.78 46 -6.22 292 100 Horz											
Horz 30-	Horizontal 2	00 - 1000N	1Hz								
			Detector	Horz 44067 02May12	30- 1000MHz 02Feb12	dB[uVolts/meter]	Part 15 Subpart C	Margin		_	Polarity
	238.4192	25.98	PK	12.2	1.6	39.78	46	-6.22	292	100	Horz
Vertical 200 - 1000MHz	Vertical 200	- 1000MHz	<u>.</u>								
LogP 3M 3MLoc FCC Part 15 44067 1000MHz Subpart C Azimuth Height	Test	Meter		Vert 44067 02May12	30- 1000MHz 02Feb12	dB[uVolts/meter]	Part 15 Subpart C	Margin			Polarity
231.6158 28.05 PK 11.7 1.6 41.35 46 -4.65 17 200 Vert	231.6158		PK	11.7	1.6		46	-4.65		200	

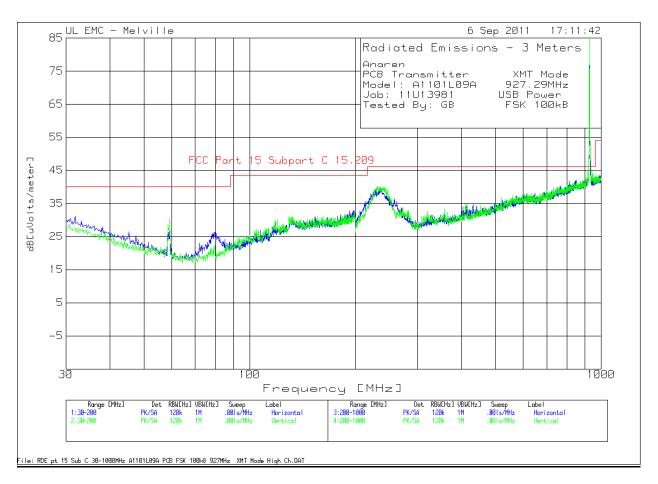
PK - Peak detector	
QP - Quasi-Peak detector	
LnAv - Linear Average detector	
LgAv - Log Average detector	
Av - Average detector	
CAV - CISPR Average detector	
RMS - RMS detection	

RMS - RMS detection

Anaren										
PCB Transi	mitter XI	MT Mode								
Model: A11	01L09C N	1onopole 91	4.99MHz							
Job: 11U13	981 US	B Power								
Tested By:	GB FSI	K 100kB								
Horizontal 200 - 1000MHz										
Test Meter Frequency Reading Detector		LogP 3M Horz 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity	
238.41	18.36	QP	12.2	1.6	32.16	46	-13.84	86	222	Horz
Vertical 200	Vertical 200 - 1000MHz									
Test Meter Frequency Reading Detector		LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity	
231.61	25.13	QP	11.7	1.6	38.43	46	-7.57	314	277	Vert
PK - Peak d	PK - Peak detector									
QP - Quasi-	QP - Quasi-Peak detector									
LnAv - Linea	LnAv - Linear Average detector									
LgAv - Log	LgAv - Log Average detector									
Av - Averaç	Av - Average detector									
CAV - CISF	CAV - CISPR Average detector									
			I	I		ı		I		

Laboratories Inc.

DATE: 2011-11-01



The model number in the title block should state a1101L09C

Anaren										
PCB Transi	mitter XI	MT Mode								
Model: A11	01L09C M	onopole 927	7.29MHz							
Job: 11U13		B Power								
Tested By:	GB FSI	< 100kB								
j										
Horizontal 3	0 - 200MHz	7								
			3M	3MLoc		FCC				
			Bicon 54	30-		Part 15				
Test	Meter		Horz 05Apr12	1000MHz 02Feb12		Subpart C		Azimuth	Height	
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	15.209	Margin	[Degs]	[cm]	Polarity
59.2693	18.92	PK	6.9	0.7	26.52	40	-13.48	272	400	Horz
79.6897	18.31	PK	7.1	0.9	26.31	40	-13.69	242	400	Horz
10.0001	10.01			0.0	20.01	10	10.00		100	11012
Vertical 30 -	200MHz									
			3M	3MLoc		FCC				
			Bicon 54	30-		Part 15				
Test	Meter		Vert 05Apr12	1000MHz 02Feb12		Subpart C		Azimuth	Hoight	
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	15.209	Margin	[Degs]	Height [cm]	Polarity
59.2693	22.78	PK	6.9	0.7	30.38	40	-9.62	298	100	Vert
132.4424	15.57	PK	14.2	1.2	30.97	43.5	-12.53	176	100	Vert
102.1121				00.01	10.0	12.00		100	7010	
Horizontal 2	00 - 1000M	IH ₇								
		··-	LogP 3M	3MLoc		FCC				
			Horz	30-		Part 15				
Toot	Motor		44067	1000MHz		Subpart		A zimusth	Lloight	
Test Frequency	Meter Reading	Detector	02May12 [dB]	02Feb12 [dB]	dB[uVolts/meter]	C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
235.6178	25.95	PK	12.1	1.7	39.75	46	-6.25	192	100	Horz
233.0170	20.00	1 10	12.1	1.7	33.73	70	-0.20	132	100	11012
Vertical 200	- 1000MHz	,								
Vertical 200	- 1000ivii iz	<u> </u>	LogP 3M	3MLoc		FCC				
			Vert	30-		Part 15				
			44067	1000MHz		Subpart				
Test	Meter	Detector	02May12	02Feb12	dD[u\/olto/motor]	C 15.209	Morain	Azimuth		Dolority
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]		Margin	[Degs]	[cm]	Polarity
231.6158	26.87	PK	11.7	1.6	40.17	46	-5.83	359	200	Vert
PK - Peak d	PK - Peak detector									
QP - Quasi-		tor								
LnAv - Linea										
	LgAv - Log Average detector Av - Average detector									
		detector								
	CAV - CISPR Average detector RMS - RMS detection									
CRMS - CIS		ataction								
CKIVIO - CIO	DE IN INIO U	CICCIOII				<u> </u>		<u> </u>	I	l .

Anaren										
PCB Transi	mitter XI	MT Mode								
Model: A11	01L09C I	Monopole 92	27.29MHz							
Job: 11U13	981 US	B Power								
Tested By:	GB FSI	K 100kB								
Horizontal 200 - 1000MHz										
Test Meter Frequency Reading Detector			LogP 3M Horz 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
235.62	26.44	QP	12.1	1.7	40.24	46	-5.76	268	100	Horz
Vertical 200 - 1000MHz										
Test Frequency			LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height	Polarity
231.62	24.46	QP	11.7	1.6	37.76	46	-8.24	320	191	Vert
PK - Peak d	etector									
QP - Quasi-	Peak detec	tor								
LnAv - Linea	ar Average	detector								
LgAv - Log	Average de	tector								
Av - Averag	e detector									
CAV - CISF	PR Average	detector								
RMS - RMS	RMS - RMS detection									
CRMS - CIS	CRMS - CISPR RMS detection									

30

Range [MHz] 1:30-200 Frequency [MHz]

Range [MHz] 3:280-1000 4:280-1000 Det RBW[Hz] VBW[Hz] PK/SA 120k 1M PK/SA 120k 1M

100

.001s/MHz

Horizontal

Vertical

Det RBW[Hz] VBW[Hz]

120k 120k

File: RDE pt 15 CIB 38-1080MHz 3M Al181L09A PCB XMT MSK 580kB Made law Ch.DAT

DATE: 2011-11-01

1000

Label Horizontal Vertical

.001s/MHz

REPORT NO: 11U13981 DATE: 2011-11-01 FCC ID: X7J-A10091602 IC: 8975A-A10091602

		I	l				l	I	1	I
Anaren										
PCB Transr	mitter XM	T Mode								
Model: A11	01L09A PC	В								
Job: 11U13	981 USE	3 Power								
Tested By: AA Low Chan										
Horizontal 3	Horizontal 30 - 200MHz									
Test Meter Frequency Reading Detector		3M Bicon 54 Horz 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity	
78.1582	28.35	PK	6.9	0.9	36.15	40	-3.85	272	200	Horz
Test Frequency	Meter Reading	Detector	3M Bicon 54 Vert 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
73.3934	28.67	PK	6.3	0.9	35.87	40	-4.13	121	100	Vert
Vertical 200	- 1000MHz									
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
236.4182	27.4	PK	11.8	1.7	40.9	46	-5.1	18	100	Vert
418.5093	22.93	PK	16.5	2.2	41.63	46	-4.37	300	100	Vert

PK - Peak detector	
QP - Quasi-Peak detector	
LnAv - Linear Average detector	
LgAv - Log Average detector	
Av - Average detector	
CAV - CISPR Average detector	
RMS - RMS detection	
CRMS - CISPR RMS detection	

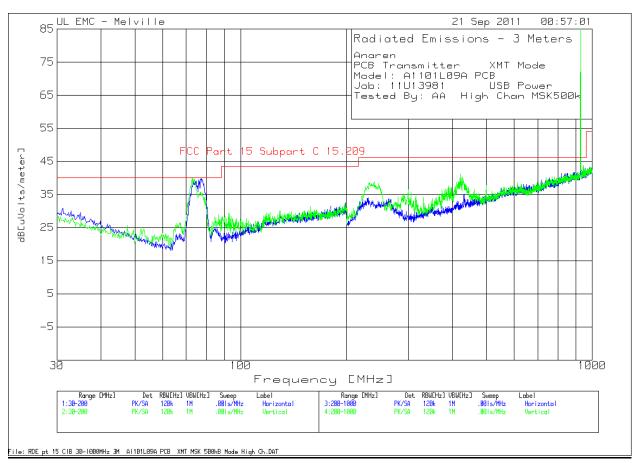
Anaren										
PCB Transi	mitter XM ⁻	Γ Mode								
Model: A11	01L09A PC	В								
Job: 11U13	981 USE	3 Power								
Tested By:	AA Low Ch	an MSK500)k							
Horizontal 3	0 - 200MHz									
Test Frequency	Meter Reading	Detector	3M Bicon 54 Horz 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
74.4489	19.15	QP	6.1	0.9	26.15	40	-13.85	357	240	Horz
Test Frequency	Meter Reading	Detector	3M Bicon 54 Vert 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
73.3265	15.89	QP	6.3	0.9	23.09	40	-16.91	83	299	Vert
Vertical 200	- 1000MHz									
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
230.7888	22.93	QP	11.7	1.6	36.23	46	-9.77	335	176	Vert
428.7204	17.9	QP	16.5	2.3	36.7	46	-9.3	191	131	Vert
PK - Peak d	etector									
QP - Quasi-	Peak detect	or								
LnAv - Linea	ar Average o	detector								
LgAv - Log /	Average det	ector								
Av - Averag	Av - Average detector									
CAV - CISF	R Average	detector								
RMS - RMS	MS - RMS detection									
CRMS - CIS	SPR RMS de	etection								

File: RDE pt 15 CIB 3B-10B0MHz 3M Al1B1L09A PCB XMT MSK 500kB Mode Mid Ch.DAT

DATE: 2011-11-01

Anaren										
PCB Transi	mitter XM	T Mode								
Model: A11	01L09A PC	В								
Job: 11U13	981 US	B Power								
Tested By:	AA Mid Ch	an								
Horizontal 3	0 - 200MHz	7								
Test Frequency	Meter Reading	Detector	3M Bicon 54 Horz 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
74.9249	24.96	PK	6.2	0.9	32.06	40	-7.94	207	400	Horz
Vertical 30 -	200MHz		014	OMI		FCC				
Test Frequency	Meter Reading	Detector	3M Bicon 54 Vert 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height	Polarity
73.3934	27.7	PK	6.3	0.9	34.9	40	-5.1	242	100	Vert
Vertical 200	- 1000MHz	<u>7</u>								
Test Frequency			LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
234.8174	28.97	PK	11.7	1.7	42.37	46	-3.63	2	100	Vert
417.3087	23.05	PK	16.4	2.2	41.65	46	-4.35	134	100	Vert
PK - Peak d	etector									
QP - Quasi-	Peak detec	tor								
LnAv - Linear Average detector										
LgAv - Log /	LgAv - Log Average detector									
Av - Averag	Av - Average detector									
CAV - CISF	CAV - CISPR Average detector									
RMS - RMS	RMS - RMS detection									
CRMS - CIS	PR RMS d	etection								

Anaren										
PCB Trans	mitter XM	T Mode								
Model: A11	01L09A PC	В								
Job: 11U13	981 US	B Power								
Tested By:	AA Mid Ch	nan								
Vertical 30 -	200MHz									
Test Frequency	Frequency Reading Detector			3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
73.1996	26.65	QP	6.2	0.9	33.75	40	-6.25	306	101	Vert
Vertical 200	Vertical 200 - 1000MHz									
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
235.1006	21.35	QP	11.7	1.7	34.75	46	-11.25	352	111	Vert
422.9112	18.33	QP	16.5	2.3	37.13	46	-8.87	246	101	Vert
PK - Peak d	etector									
QP - Quasi-	Peak detec	tor								
LnAv - Linea	ar Average	detector								_
LgAv - Log	LgAv - Log Average detector									
Av - Averag	Av - Average detector									
CAV - CISE	CAV - CISPR Average detector									
RMS - RMS	RMS - RMS detection									
CRMS - CIS	CRMS - CISPR RMS detection									



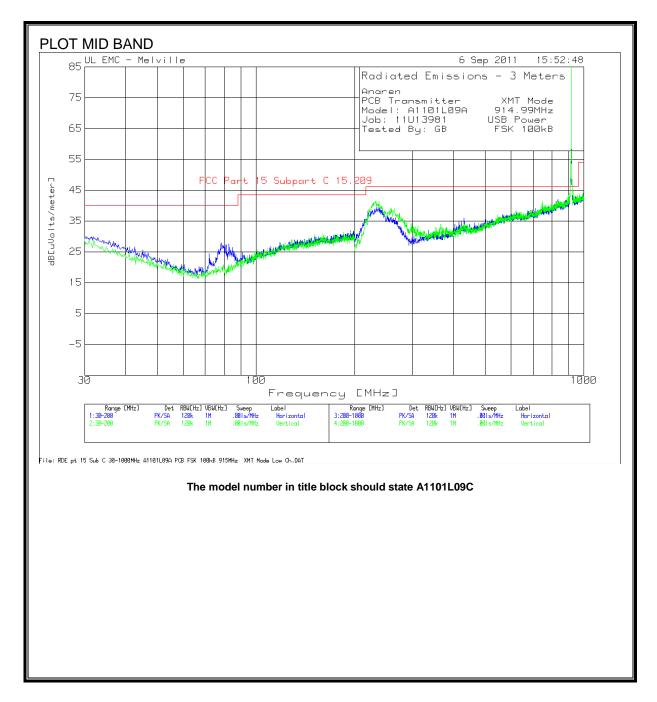
			Т						1	
Anaren										
PCB Transi	mitter XM	T Mode								
Model: A11	01L09A PC	B								
Job: 11U13	981 US	B Power								
Tested By:	AA High C	han	T							
Horizontal 3	<u>0 - 200MHz</u>	<u> </u>								
Test Frequency	Meter Reading	Detector	3M Bicon 54 Horz 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
77.3073	32.15	PK	6.7	0.9	39.75	40	-0.25	263	400	Horz
Vertical 30 -	200MHz		3M							
Test Frequency	Frequency Reading Detecto			3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
72.7127			6.1	0.9	40.16	40	0.16	241	100	Vert
Vertical 200	- 1000MHz	7								
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
239.6198	25.29	PK	11.9	1.6	38.79	46	-7.21	206	100	Vert
421.3107	22.37	PK	16.5	2.2	41.07	46	-4.93	12	100	Vert
PK - Peak d	etector									
QP - Quasi-	Peak detec	tor								
LnAv - Linea	ar Average	detector								
LgAv - Log /	Average de	tector								
Av - Averag	ge detector									
CAV - CISF	PR Average	detector								
RMS - RMS	RMS - RMS detection									
CRMS - CIS	PR RMS d	etection								

CRMS - CISPR RMS detection

Anaren										
PCB Transi	mitter XM	T Mode								
Model: A11	01L09A PC	В								
Job: 11U13	981 US	B Power								
Tested By:	AA High C	han								
Horizontal 3	0 - 200MHz	<u>.</u>								
Test Meter Frequency Reading Detector		Detector	3M Bicon 54 Horz 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
73.6928	26.52	QP	6	0.9	33.42	40	-6.58	233	228	Horz
Vertical 30 -	Vertical 30 - 200MHz									
Test Frequency	Meter Reading	Detector	3M Bicon 54 Vert 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth	Height	Polarity
73.702	23.28	QP	6.3	0.9	30.48	40	-9.52	99	179	Vert
Vertical 200			0.0	0.5	00.40	40	0.02	33	175	VCIT
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
421.3	16.52	QP	16.5	2.2	35.22	46	-10.78	261	120	Vert
PK - Peak d	etector									
QP - Quasi-	Peak detec	tor								
LnAv - Linea	LnAv - Linear Average detector									
LgAv - Log	LgAv - Log Average detector									
Av - Averag	Av - Average detector									
CAV - CISF	CAV - CISPR Average detector									
RMS - RMS	RMS - RMS detection									
l			l .	1	İ	1	1	1	1	1

DATE: 2011-11-01

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



DATE: 2011-11-01

REPORT NO: 11U13981 DATE: 2011-11-01 FCC ID: X7J-A10091602 IC: 8975A-A10091602

DATA MID BAND

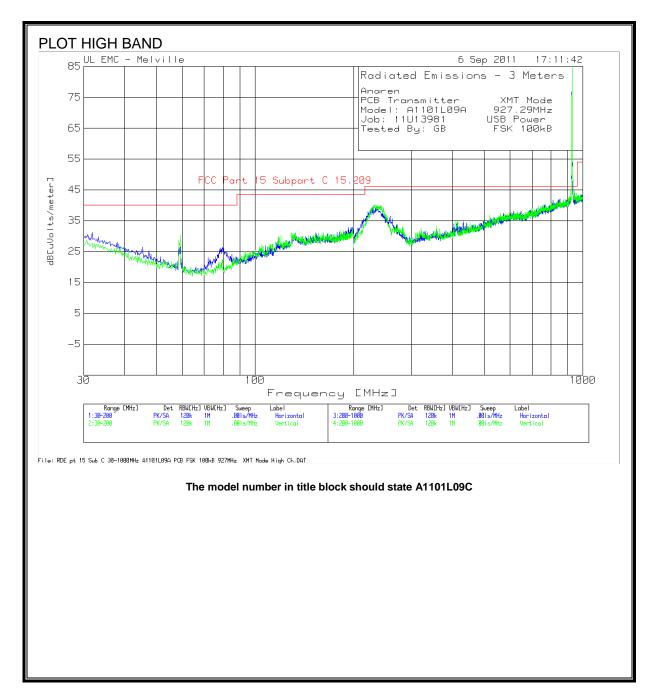
USB Pow	el: A1101L09C 914 11U13981 USB P ed By: GB	9MHz								
USB Pow	11U13981 USB P ed By: GB									
MHz	ed By: GB	ver								
	ontal 30 - 200MHz									
	Meter Reading		3M Bicon 54 Horz 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
20.15	78.3283 20.15	PK	6.9	0.9	27.95	40	-12.05	343	200	Horz
00MHz	ontal 200 - 1000MHz		LogP 3M							
	Meter ency Reading		Horz 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
25.98	38.4192 25.98	PK	12.2	1.6	39.78	46	-6.22	292	100	Horz
MHz	al 200 - 1000MHz									
	Meter ency Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
	31.6158 28.05	PK	11.7	1.6	41.35	46	-4.65	17	200	Vert
	ency Reading		t	Vert 44067 02May12 Detector [dB]	Vert 44067 1000MHz 02May12 02Feb12 Detector [dB] [dB]	Vert 44067 02May12 1000MHz 02Feb12 Detector [dB] [dB] dB[uVolts/meter]	Vert 44067 02May12 1000MHz 02Feb12 15 Subpart C 15.209 Detector [dB] dB[uVolts/meter] C 15.209	Vert 44067 02May12 1000MHz 02Feb12 15 Subpart C 15.209 Detector [dB] dB[uVolts/meter] C 15.209 Margin	Vert 44067 02May12 1000MHz 02Feb12 [dB] 15 Subpart dB[uVolts/meter] Azimuth C 15.209 Azimuth [Degs]	Vert 44067 02May12 1000MHz 02Feb12 [dB] 15 Subpart dB[uVolts/meter] Azimuth C 15.209 Height Margin Detector [dB] dB[uVolts/meter] C 15.209 Margin [Degs] [cm]

PK - Peak detector				
QP - Quasi-Peak detector				
LnAv - Linear Average detector				
LgAv - Log Average detector				
Av - Average detector				
CAV - CISPR Average detector				
RMS - RMS detection				
CRMS - CISPR RMS detection				

Anaren				
PCB Transmitter XMT Mode				
Model: A1101L09A 914.99MHz				
Job: 11U13981 USB Power				
Tested By: GB FSK 100kB				

Horizontal 200	- 1000MHz									
Test Frequency	Meter Reading	Detector	LogP 3M Horz 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
238.41	18.36	QP	12.2	1.6	32.16	46	-13.84	86	222	Horz
Vertical 200 - 1	 1000MHz									
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
231.61	25.13	QP	11.7	1.6	38.43	46	-7.57	314	277	Vert
PK - Peak dete										
QP - Quasi-Pe	ak detector									
LnAv - Linear	Average detec	ctor								
LgAv - Log Ave	erage detecto	r								
Av - Average	Av - Average detector									
CAV - CISPR	Average dete	ctor								
RMS - RMS de										
CRMS - CISPI	CRMS - CISPR RMS detection									

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



DATE: 2011-11-01

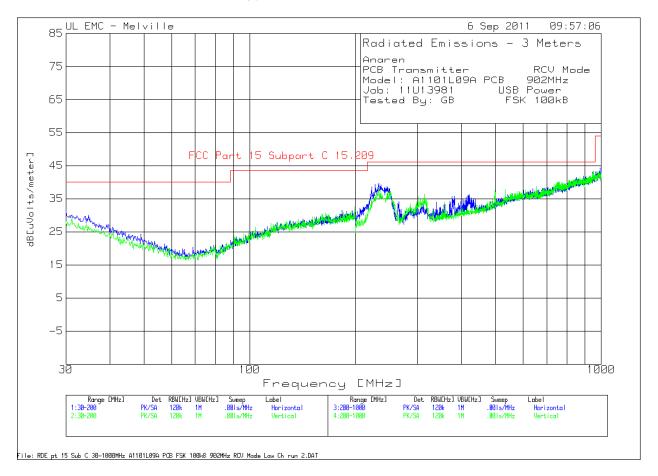
REPORT NO: 11U13981 DATE: 2011-11-01 FCC ID: X7J-A10091602 IC: 8975A-A10091602

DATA HIGH BAND

DATARI	DII DAI		I							
Anaren										
PCB Transi	mitter XN	/IT Mode								
Model: A11	01L09C 9	27.29MHz	1							
Job: 11U13	981 USE	3 Power								
Tested By:	GB	T								
Horizontal 3	0 - 200MHz									
Test Frequency	Meter Reading	Detector	3M Bicon 54 Horz 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
59.2693	18.92	PK	6.9	0.7	26.52	40	-13.48	272	400	Horz
79.6897	18.31	PK	7.1	0.9	26.31	40	-13.69	242	400	Horz
Vertical 30 -	200MHz									
Test Frequency	Meter Reading	Detector	3M Bicon 54 Vert 05Apr12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
59.2693	22.78	PK	6.9	0.7	30.38	40	-9.62	298	100	Vert
132.4424	15.57	PK	14.2	1.2	30.97	43.5	-12.53	176	100	Vert
Horizontal 2	00 - 1000M	Hz								
Test Frequency	Meter Reading	Detector	LogP 3M Horz 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
235.6178	25.95	PK	12.1	1.7	39.75	46	-6.25	192	100	Horz
Vertical 200	- 1000MHz									
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
231.6158	26.87	PK	11.7	1.6	40.17	46	-5.83	359	200	Vert
PK - Peak d	otoeter									
QP - Quasi-		tor								
LnAv - Linea										
	LgAv - Log Average detector									
	Av - Average detector									
	CAV - CISPR Average detector									
	RMS - RMS detection									
CKIVIS - CIS	CRMS - CISPR RMS detection									

Anaren										
PCB Trans	mitter XN	/IT Mode								
Model: A11	01L09C 9	27.29MHz								
Job: 11U13	981 USE	3 Power								
Tested By:	GB									
Horizontal 2	00 - 1000M	Hz								
Test Frequency	Meter Reading	Detector	LogP 3M Horz 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
235.62	26.44	QP	12.1	1.7	40.24	46	-5.76	268	100	Horz
Vertical 200	Vertical 200 - 1000MHz									
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
231.62	24.46	QP	11.7	1.6	37.76	46	-8.24	320	191	Vert
PK - Peak d	letector									
QP - Quasi-	Peak detect	tor								
LnAv - Linea	ar Average	detector								
LgAv - Log	Average det	ector								
Av - Averag	Av - Average detector									
CAV - CISF	CAV - CISPR Average detector									
RMS - RMS	RMS - RMS detection									
CRMS - CIS	RMS - CISPR RMS detection									

Receive mode below 1GHz PCB type antenna



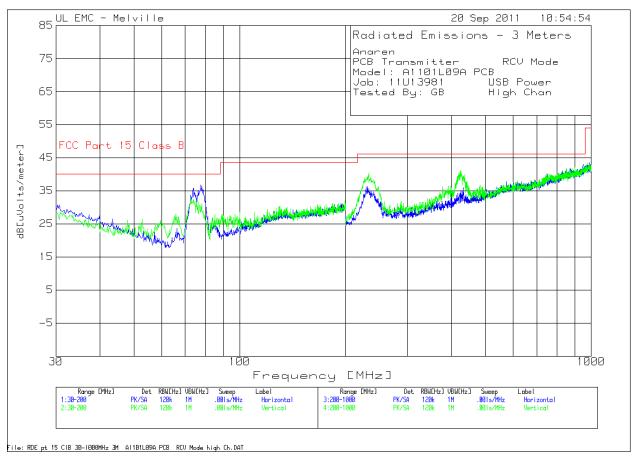
Model in title block should state A1101L09C

Anaren	Anaren PCB Transmitter RCV Mode Model: A1101L09C Monopole Image: RCV Mode in the policy of the policy												
PCB Transi	mitter F	RCV Mode											
Model: A11	01L09C Mo	nopole									Ш		
Job: 11U13	981 USE	3 Power											
Tested By:	GB FSK	100kB											
Horizontal 2	00 - 1000M	L Hz									П		
Test Frequency	Meter Reading	Detector	LogP 3M Horz 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity			
222.4112	25.23	PK	11.7	1.6	38.53	46	-7.47	98	100	Horz	Ш		
228.014	23.91	PK	11.9	1.6	37.41	46	-8.59	17	100	Horz			
233.2166	24.31	PK	12.1	1.6	38.01	46	-7.99	197	100	Horz			
890.7454	15.23	PK	23.1	3.5	41.83	46	-4.17	17	200	Horz			
946.3732	13.92	PK	23.8	3.6	41.32	46	-4.68	324	200	Horz	Ш		
Vertical 200	- 1000MHz		LoaD 2M	3MLoc		FCC					\vdash		
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity			
929.965	15.01	PK	23.5	3.5	42.01	46	-3.99	221	400	Vert			
949.1746	14.02	PK	24.2	3.6	41.82	46	-4.18	256	400	Vert			
											Ц		
PK - Peak d											\dashv		
QP - Quasi-											_		
LnAv - Linear Average detector													
LgAv - Log /		ector									_		
Av - Averag											=		
	CAV - CISPR Average detector RMS - RMS detection												
RMS - RMS	aetection												

CRMS - CISPR RMS detection

DATE: 2011-11-01

Anaren											
PCB Trans	mitter F	RCV Mode									
Model: A11	01L09C										
Job: 11U13	981 USE	3 Power									
Tested By:	GB FSk	(100kB									
Horizontal 2	00 - 1000M	Hz									
Test Frequency	Meter Reading	Detector	LogP 3M Horz 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity	
893.23	9.04	QP	23.2	3.5	35.74	46	-10.26	257	258	Horz	
946.4	946.4 9.2 QP		23.8	3.6	36.6	46	-9.4	0	100	Horz	
Vertical 200 - 1000MHz											
Test Frequency	Meter Reading	Detector	LogP 3M Vert 44067 02May12 [dB]	3MLoc 30- 1000MHz 02Feb12 [dB]	dB[uVolts/meter]	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity	
929.2098	9.15	QP	23.5	3.5	36.15	46	-9.85	55	160	Vert	
949.0647	9.15	QP	24.2	3.6	36.95	46	-9.05	112	263	Vert	
PK - Peak d	etector										
QP - Quasi-	Peak detect	or									
LnAv - Linea	ar Average	detector									
LgAv - Log											
Av - Averag	je detector										
		detector									
	CAV - CISPR Average detector										
CRMS - CIS	SPR RMS de	etection									



				1				T		
Anaren										
PCB Trans	mitter R	CV Mode								
Model: A11	01L09A P0	СВ								
Job: 11U13	3981 US	B Power								
Tested By:	GB Hia	h Chan								
, , , , , , , , , , , , , , , , , , ,										
Horizontal 3	80 - 200MH	Z								
						FCC				
						Part				
				GL-		15				
Test	Meter		AF-54	3M		Class		Azimuth	Height	
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	В	Margin	[Degs]	[cm]	Polarity
73.9039	28.73	PK	6.1	0.9	35.73	40	-4.27	99	200	Horz
77.6476	29.1	PK	6.8	0.9	36.8	40	-3.2	129	200	Horz
Vertical 30 -	- 200MHz									
						FCC				
						Part				
			l . -	GL-		15				
Test	Meter	D. ((AF-54	3M	IDE Malkada atau	Class		Azimuth	Height	D. L. de
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	В	Margin	[Degs]	[cm]	Polarity
73.9039	25.08	PK	6.4	0.9	32.38	40	-7.62	344	100	Vert
Horizontal 2	200 - 1000N	ИHz								
						FCC				
			AF-	GL-		Part				
Test	Meter		44067	3M		15 Class		Azimuth	Height	
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	B	Margin	[Degs]	[cm]	Polarity
880.3402	14.53	PK	23.2	3.5	41.23	46	-4.77	207	400	Horz
934.7674	14.55	PK	23.5	3.5	41.55	46	-4.45	207	300	Horz
934.7074	14.55	FIX	23.3	3.3	41.55	40	-4.43		300	11012
Vertical 200	100011	<u> </u> -								
vertical 200		<u>Z</u>				FCC				
						Part				
			AF-	GL-		15				
Test	Meter		44067	3M		Class		Azimuth	Height	
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	В	Margin	[Degs]	[cm]	Polarity
232.8164	26.99	PK	11.7	1.6	40.29	46	-5.71	9	200	Vert
424.9125	22.3	PK	16.5	2.3	41.1	46	-4.9	354	100	Vert
898.3492	15.4	PK	23.1	3.5	42	46	-4	167	300	Vert
952.3762	14.61	PK	24.2	3.6	42.41	46	-3.59	167	300	Vert
002.0702	17.01		27.2	3.0	72.71	+0	3.00	107	300	VOIL
PK - Peak c	letector	I	I		<u> </u>	I	<u> </u>	<u> </u>	I]
QP - Quasi-		rtor								
LnAv - Line										
LgAv - Log										
Av - Averaç	je detector									

Anaren										
PCB Transmitter RCV Mode										
Model: A1101L09A PCB										
Job: 11U13	3981 US	B Power								
Tested By:	GB Hia	h Chan								
,										
Horizontal 3	0 - 200MH	Z								
				GL-		FCC Part 15				
Test Frequency	Meter Reading	Detector	AF-54 [dB]	3M [dB]	dB[uVolts/meter]	Class B	Margin	Azimuth [Degs]	Height [cm]	Polarity
74	22.56	QP	6.1	0.9	29.56	40	-10.44	219	295	Horz
77.6	23.1	QP	6.8	0.9	30.8	40	-9.2	220	216	Horz
77.0	2011	ζ.	0.0	0.0	00.0		0.2			11012
Vertical 30 -	· 200MHz									
Test Frequency	Meter Reading	Detector	AF-54 [dB]	GL- 3M [dB]	dB[uVolts/meter]	FCC Part 15 Class B	Margin	Azimuth [Degs]	Height [cm]	Polarity
74	17.32	QP	6.4	0.9	24.62	40	-15.38	67	160	Vert
Horizontal 200 - 1000MHz										
Test Frequency	Meter Reading	Detector	AF- 44067 [dB]	GL- 3M [dB]	dB[uVolts/meter]	FCC Part 15 Class B	Margin	Azimuth [Degs]	Height	Polarity
880.3902	9.04	QP	23.2	3.5	35.74	46	-10.26	321	216	Horz
934.76	9.15	QP	23.5	3.5	36.15	46	-9.85	185	130	Horz
00 0	01.10	<u> </u>		0.0			0.00			
Vertical 200	Vertical 200 - 1000MHz									
Test	Meter		AF- 44067	GL- 3M		FCC Part 15 Class		Azimuth	Height	
Frequency	Reading	Detector	[dB]	[dB]	dB[uVolts/meter]	B 40	Margin	[Degs]	[cm]	Polarity
232.8	24.86	QP	11.7	1.6	38.16	46	-7.84	331	189	Vert
424.9	15.63	QP	16.5	2.3	34.43	46	-11.57	287	207	Vert
898.2731	9.15	QP	23.1	3.5	35.75	46	-10.25	350	345	Vert
952.4	9.09	QP	24.2	3.6	36.89	46	-9.11	295	175	Vert
PK - Peak detector										
QP - Quasi-Peak detector										
LnAv - Linear Average detector										
LgAv - Log Average detector										
Av - Average detector										
CAV - CISPR Average detector RMS - RMS detection										
	lotoctic:-									
CRMS - CISPR RMS detection										

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted Limit (dBuV)			
	Quasi-peak	Average		
0.15-0.5	66 to 56 °	56 to 46 *		
0.5-5	56	46		
5-30	60	50		

DATE: 2011-11-01

IC: 8975A-A10091602

TEST PROCEDURE

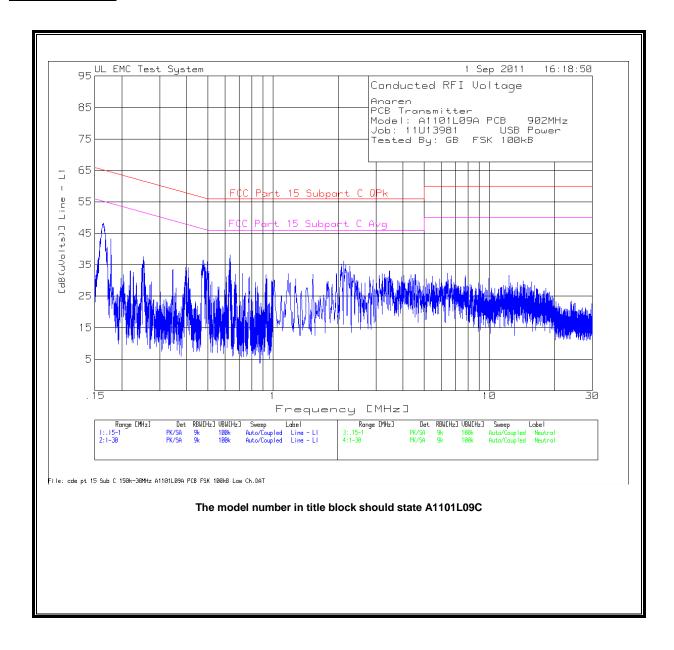
ANSI C63.4

RESULTS: Pass

Decreases with the logarithm of the frequency.

6 WORST EMISSIONS

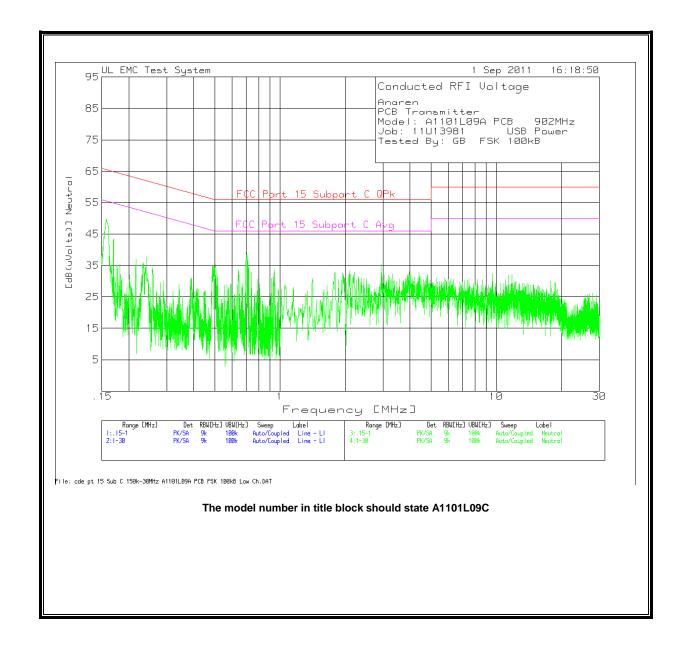
LINE 1 RESULTS



FAX: (877) 854-3577

DATE: 2011-11-01

LINE 2 RESULTS



DATE: 2011-11-01

Anaren

PCB Transmitter

Model: A1101L09C PCB 902MHz

Job: 11U13981 USB

Power

Tested By: GB FSK 100kB

Line - L1 .15 -

1MHz

		5A636 with TI					
Test	Meter	and Sw Line 1		FCC Part 15	FCC Part	15	
Frequency	Reading Detector	[dB]	[dB(uVolts)]	Subpart C QPk	Margin Subpart C	Avg	Margin
0.16445	36.86 PK	11.4	48.26	65.2	: -16.94	55.2	-6.94
0.17806	31.94 PK	11.3	43.24	64.6	5 -21.36	54.6	-11.36
0.25151	26.63 PK	10.9	37.53	61.7	' -24.17	51.7	-14.17
0.47545	25.92 PK	10.5	36.42	56.4	-19.98	46.4	-9.98
0.63443	27.76 PK	10.4	. 38 16	56	: -17 84	46	-7 84

Line - L1 1 -30MHz

5A636 with TI

FCC Part 15 FCC Part 15 Meter and Sw Line 1 Frequency Reading Detector [dB] [dB(uVolts)] Subpart C QPk Margin Subpart C Avg Margin 2.12543 25.68 PK 10.4 36.08 56 -19.92 46 -9.92

Neutral .15 - 1MHz

		5A636 with TI				
Test	Meter	and Sw Line 2		FCC Part 15	FCC Par	t 15
Frequency	Reading Detector	[dB]	[dB(uVolts)]	Subpart C QPk	Margin Subpart	C Avg Margin
0.15748	38.12 PK	11.5	49.62	65.6	5 -15.98	55.6 -5.98
0.2158	25.93 PK	11	36.93	63	3 -26.07	53 -16.07
0.2408	26.92 PK	10.9	37.82	62.1	-24.28	52.1 -14.28
0.49194	24.2 PK	10.5	34.7	56.1	-21.4	46.1 -11.4
0.69921	28.07 PK	10.4	38.47	56	5 -17.53	46 -7.53

Neutral .15 - 1MHz

5A636 with TI

FCC Part 15 FCC Part 15 Meter and Sw Line 2 [dB(uVolts)] Subpart C QPk Margin Subpart C Avg Margin Frequency Reading Detector [dB] 0.15705 35.53 Av 11.5 47.03 65.62 -18.59 55.62 -8.59

DATE: 2011-11-01