REPORT

issued by an FCC listed Laboratory Reg. no. 93866.
The test site complies with RSS-Gen, IC file no: 3482A

Date	Reference	Page
2011-04-12	FX104348-F27	1 (2)

1002
ISO/IEC 17025

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Class II permissive change measurements on RRUS 11 B4 1700/ 2100 MHz with FCC ID: TA8AKRC161254-1 and IC: 287AB-AS1612541

(8 appendices)

Test object

RRUS 11 B4, KRC 161 254/1 Rev. R1D

Summary

Standard		Compliant	Appendix
FCC CFR 47 / IC RSS-139			
2.1046 / RSS-139 6.4	RF power output	Yes	2
2.1049 / RSS-Gen 4.6.1	Occupied bandwidth	Yes	3
2.1051 / RSS-139 6.5	Band edge	Yes	4
2.1051 / RSS-139 6.5	Spurious emission at antenna terminals	Yes	5
2.1053 / RSS-139 6.5	Field strength of spurious radiation	Yes	6
2.1055 / RSS-139 6.3	Frequency stability	Yes	7
Industry Canada RSS-139			
RSS-139 6.6	Receiver spurious emissions	N.A.	Note 1

Note 1: The client declared that the test object has no stand-by mode. Both TX are always active. RX measurements are claimed not applicable

Note 2: Above RSS-139 items are given as cross-reference only. Measurements were performed according to ANSI procedures referenced by FCC and covered by SP's accreditation.

SP Technical Research Institute of Sweden
Electronics - EMC

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Technical Officer

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Technical Manager

FCC ID: TA8AKRC161254-1
IC: 287AB-AS1612541

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Description – Test object

Equipment:	Radio equipment RRUS 11 B4 running in WCDMA mode supporting single and multi carrier.
Antenna ports:	2 TX/RX ports
Frequency bands:	TX: 2110 – 2155 MHz RX: 1710 – 1755 MHz
Modulations:	QPSK, 16QAM and 64QAM
Nominal output power: (Maximum)	Single carrier: 1x 44.8 dBm (1x 30W) on each antenna port Multi carrier: 2x 41.8 dBm (2x 15W) on each antenna port 4x 38.8 dBm (4x 7.5W) on each antenna port
Channel bandwidth:	4.2 to 5 MHz (configurable in steps of 100/200 kHz)
Channel spacing:	4.4 to 5 MHz (configurable in steps of 100/200 kHz)
Nominal power voltage:	-48 VDC

Tested channels

	Downlink		Uplink	
Channel	Frequency*	UARFCN	Frequency*	UARFCN
B	2112.4	1537	1712.4	1312
B+5	2117.4	1562	1717.4	1337
B+10	2122.4	1587	1722.4	1362
B+15	2127.4	1612	1727.4	1387
M	2132.5	1987	1732.5	1762
T-15	2137.6	1663	1737.6	1438
T-10	2142.6	1688	1742.6	1463
T-5	2147.6	1713	1747.6	1488
T	2152.6	1738	1752.6	1513

* Frequency in MHz

Operation mode during measurements

Measurements were performed with the test object transmitting the Test models which are defined in 3GPP TS 25.141. Test model 1 (TM1) uses the QPSK modulation only, Test model 5 (TM5) includes the 16QAM modulation and Test model 6 (TM6) includes the 64QAM modulation.

The settings below were found to be representative for all traffic scenarios when several settings with the different modulations, channel bandwidths and the number of carriers were tested to find the worst case setting. These settings were used for all measurements if not otherwise noted.

Single carrier
TM1: 64 DPCH:s at 30 ksps (SF=128)
Multi carrier
TM1: 32 DPCH:s at 30 ksps (SF=128) in each carrier (Two carriers activated)

Channel bandwidth 5 MHz

Conducted measurements

Complete TX measurements were done at port RF A. Limited complementary TX measurements were done at port RF B to verify identical performance for both transmitter chains. RX measurements were considered not applicable, as the client claims the test object can not provide a stand-by mode. Both TX are always active.

Radiated measurements

The test object was powered with -48 VDC. All measurements were performed with the test object configured for maximum transmit power. The configuration represents worst case for radiated spurious emission measurements.

The RF output power port was via a RF attenuator connected to functional test equipment for supervision.

The RRUS unit was allocated to the following UARFCN:

Single Carrier: (One carrier configuration)

Cell	1	1	1
Channel	B	M	T

Multi Carrier: (Two carrier configuration)

Cell	1	2
Channel	B	B+10
Channel	T-10	T

Multi Carrier: (Four carrier configuration)

Cell	1	2	3	4
Channel	B	B+5	B+10	B+15
Channel	T	T-5	T-10	T-15

Purpose of test

The purpose of the tests is a class II permissive change verification of maintained compliance to the performance characteristics specified in applicable parts of FCC CFR 47 and IC RSS-139. The changes comprise addition of a new RAT, WCDMA mode, and a product revision update to version R1D due to minor HW changes as described in the client documentation. The preceding hardware revision has been filed with RAT LTE earlier. Additional to the results presented in this report for WCDMA mode, limited complementary verification measurements in LTE mode were performed and showed maintained compliance with hardware version R1D. Thus it was deemed sufficient to present only the results for the new WCDMA mode in this report.

References

Measurements were done according to relevant parts of the following standards:
ANSI 63.4-2003
ANSI/TIA/EIA-603-C-2004
CFR 47 part 2, October 1st , 2010
CFR 47 part 27, October 1st, 2010
3GPP TS 25.141, version 8.9.0
RSS-Gen Issue 3
RSS-139 Issue 2

Measurement equipment

Measurement equipment	Calibration Due	SP number
Test site Tesla	2012-10	503 881
R&S FSIQ 40	2011-07	503 738
R&S FSQ 40	2011-07	504 143
R&S ESI 26	2011-08	503 292
High pass filter	2011-07	504 199
High pass filter	2011-07	503 739
High pass filter	2011-07	503 740
RF attenuator	2011-07	504 159
RF attenuator	2011-08	900 233
RF step attenuator	2012-07	503 096
Boonton RF Peak power meter/analyzer	2011-10	503 144
Boonton Power sensor 56518-S/4	2012-10	503 145
Chase Bilog Antenna CBL 6111A	2011-10	503 182
EMCO Horn Antenna 3115	2014-01	502 175
Std.gain horn FLANN model 16240-25	-	503 939
Std.gain horn FLANN model 20240-20	-	503 674
µComp Nordic, Low Noise Amplifier	2011-07	504 160
MITEQ Low Noise Amplifier	2011-06	503 285
Temperature chamber 2	2013-11	501 031
Multimeter Fluke 87	2011-04	502 190
Testo 625, Temperature and humidity meter	2011-08	504 188
Testo 635 Temperature and humidity meter	2011-04	504 203

Uncertainties

Measurement and test instrument uncertainties are described in the quality assurance documentation ”SP-QD 10885”. The measurement uncertainties can be found in the table below. The uncertainties are calculated with a coverage factor k=2 (95% level of confidence).

Reservation

The test results in this report apply only to the particular test object as declared in the report.

Delivery of test object

The test object was delivered 2011-03-18.

Manufacturer’s representative

Christer Hjorth, Ericsson AB

Test engineers

Jörgen Wassholm, Reinhold Reul and Jonas Bremholt

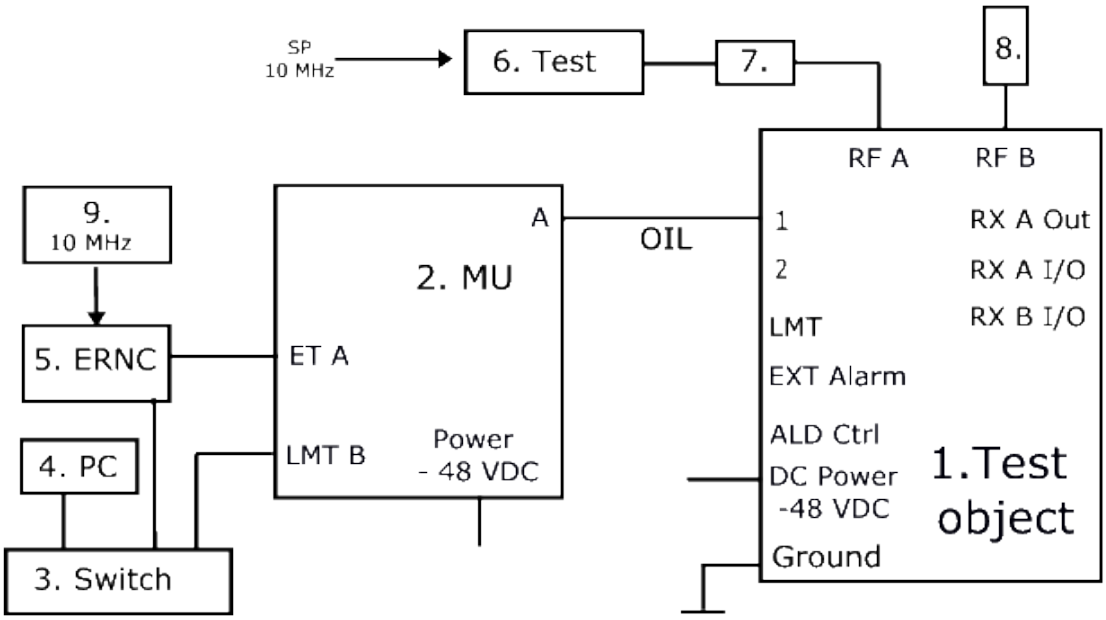
Test participant

Christer Hjorth, Ericsson AB (Partly present)

FCC ID: TA8AKRC161254-1
IC: 287AB-AS1612541

Appendix 1

Test setup: Conducted measurements



Test object

1.	RRUS 11 B4, KRC 161 254/1, R1D, CB4G735981 FCC ID: TA8AKRC161254-1 and IC: 287AB-AS1612541

Functional test equipment

2.	Main unit, see details in appendix 1.1
3.	Fast Ethernet switch, Netgear GSM 7212, BAMS - 1000517292
4.	Computer, Sunblade Ultra 45, BAMS – 1000517298
5.	ERNC SIM 145, BAMS – 1000707989
6.	SP test instrument according measurement equipment list
7.	RF attenuator, SP 504 159 and SP 900 233
8.	Attenuator, Weinschel model 48-30-33, Terminator Weinschel model 1433-4-LIM
9.	Symmetriom model 8040, BAMS - 1000838408

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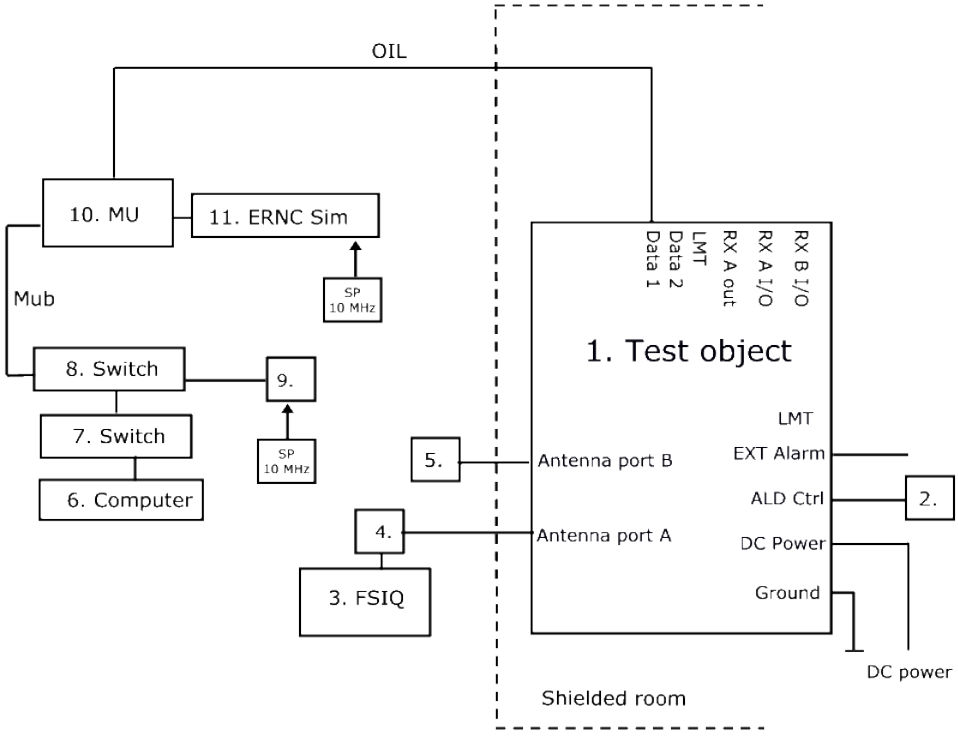
Test setup: Radiated measurements



Test object

1.	RRUS 11 B4, KRC 161 254/1, R1D, CB4G735981 FCC ID: TA8AKRC161254-1 and IC: 287AB-AS1612541

Functional test equipment

2.	RET – Remote Electrical Tilt unit
3.	Signal Analyzer, Rhode & Schwartz FSIQ 40 SP 503 738
4.	Attenuator, Weinschel model 57-40-34 S/N ML394
5.	Attenuator, Weinschel model 1433-4-LIM S/N NC023
6.	Computer, Sunblade Ultra 45, BAMS – 1000517298
7.	Fast Ethernet switch, Netgear GSM 7212, BAMS - 1000517292
8.	Fast Ethernet switch, Netgear GSM 7212, BAMS - 1000517298
9.	NTP server, Symmetricom Syncserver, BAMS - 1000562216
10.	Main unit, see details in Appendix 1.1
11.	ERNC SIM 145, BAMS - 1000707989

Interfaces:	**Type of port:**
Power configuration: -48 VDC	DC Power
Antenna port A, 7/16 connector	Antenna
Antenna port B, terminated	Antenna
LMT, only for maintenance, no cable attached	Signal
RX A I/O, not supported	Signal
RX A out, not supported	Signal
RX B I/O, not supported	Signal
ALD Ctrl, shielded multi-wire	Signal
Data 1, Optical Interface Link, Single mode opto fibre	Signal
Data 2, not supported	Signal
EXT Alarm, shielded multi-wire	Signal
Ground wire	Ground

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Appendix 1.1

RBS 6601 Main unit (Primary)

Product name	Product number	R-state	Serial number
DUW 30 01	KDU 127 161/3	R3A	C823680745
SUP 6601	1/BFL 901 009/1	R3B	BR80901303

RBS 6601 Main unit (Secondary)

Product name	Product number	R-state	Serial number
DUW 30 01	KDU 127 161/3	R3A	C823486741
SUP 6601	1/BFL 901 009/1	R3B	BR80983119

Software

Software	Revision
CXP 901 8319/1	R1A23

FCC ID: TA8AKRC161254-1 Appendix 2
IC: 287AB-AS1612541

RF power output measurements according to CFR 47 §27.50 / IC RSS-139 6.4

Date	Temperature	Humidity
2011-03-29	25 °C ± 3 °C	17 % ± 5 %
2011-03-30	24 °C ± 3 °C	16 % ± 5 %

Test set-up and procedure

The test object was connected to a power analyzer measuring peak and RMS output power in CDF mode.

Measurement equipment	SP number
Boonton RF Peak power meter/analyzer	503 144
Boonton Power sensor 56518-S/4	503 146
RF attenuator	900 233
Testo 635, temperature and humidity meter	504 203

Measurement uncertainty: 0.7 dB

Results

Single carrier: Rated output power level at RF A connector (maximum): 1x 44.8 dBm

Transmitter power (dBm / dB) RMS / PAR		
B	M	T
44.2 / 6.8	44.0 / 6.7	44.0 / 6.7

Multi carrier: Rated output power level at RF A connector (maximum): 2x 41.8 dBm/ carrier

Transmitter power (dBm / dB) RMS / PAR		
B	M	T
41.4 / 9.5	41.2 / 9.5	41.2 / 9.5

Multi carrier: Rated output power level at RF A connector (maximum): 4x 38.8 dBm/ carrier

Transmitter power (dBm / dB) RMS / PAR		
B	M	T
38.5 / 10.7	38.3 / 10.7	38.4 / 10.6

Limits

§27.50 The maximum output power may not exceed 1640 W/MHz (EIRP).
The Peak to Average Ratio (PAR) may not exceed 13 dB.

RSS-139: Consult SRSP-513 for e.i.r.p. limits on fixed and base stations operating in the 2110-2155 MHz band.

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

Complies?	Yes

FCC ID: TA8AKRC161254-1 Appendix 3
IC: 287AB-AS1612541

Occupied bandwidth measurements according to 47 CFR 2.1049 / RSS-Gen 4.6.1

Date	Temperature	Humidity
2011-03-29	25 °C ± 3 °C	17 % ± 5 %
2011-03-30	24 °C ± 3 °C	16 % ± 5 %

Test set-up and procedure

The measurements were made per definition in §2.1049. The output was connected to a signal analyzer with the RMS detector activated. The signal analyzer was connected to an external 10 MHz reference standard during the measurements.

Measurement equipment	SP number
Rohde & Schwarz signal analyzer FSQ40	504 143
RF attenuator	900 233
Testo 615 temperature and humidity meter	503 498

Measurement uncertainty: 3.7 dB

Results

The results are shown in appendix 3.1

Channel Bandwidth 5.0 MHz

	Channel	OBW
Diagram 1	B	4.18 MHz
Diagram 2	M	4.18 MHz
Diagram 3	T	4.18 MHz

Channel Bandwidth 4.2 MHz

	Channel	OBW
Diagram 4	B	3.85 MHz
Diagram 5	M	3.85 MHz
Diagram 6	T	3.85 MHz

FCC ID: TA8AKRC161254-1 Appendix 3.1
IC: 287AB-AS1612541

Diagram 1

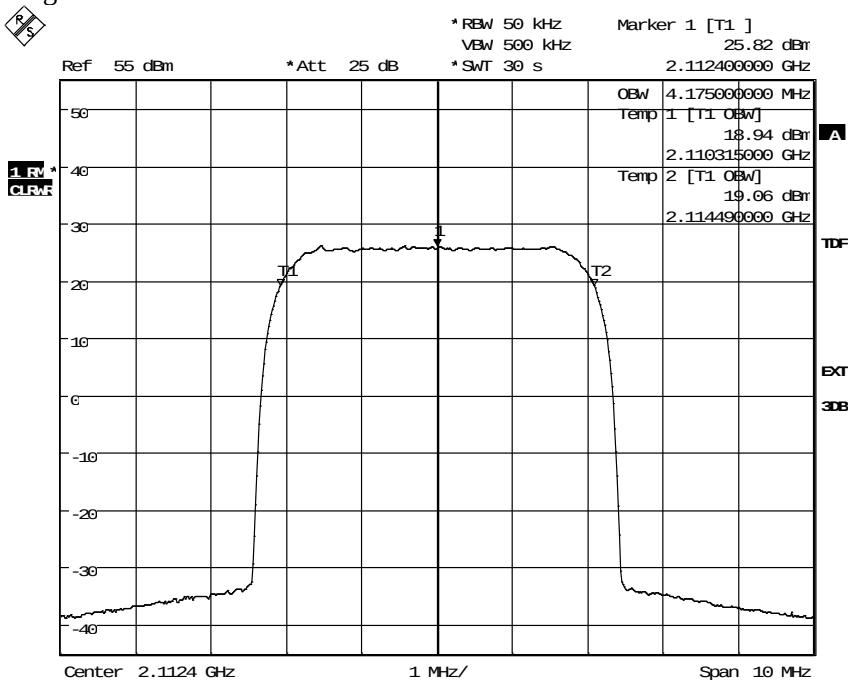

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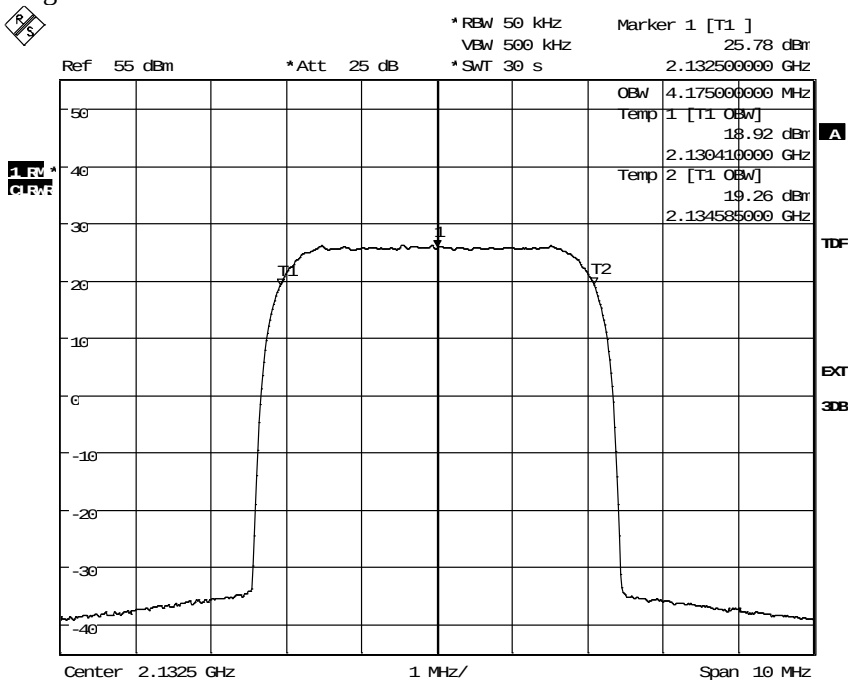
Diagram 2



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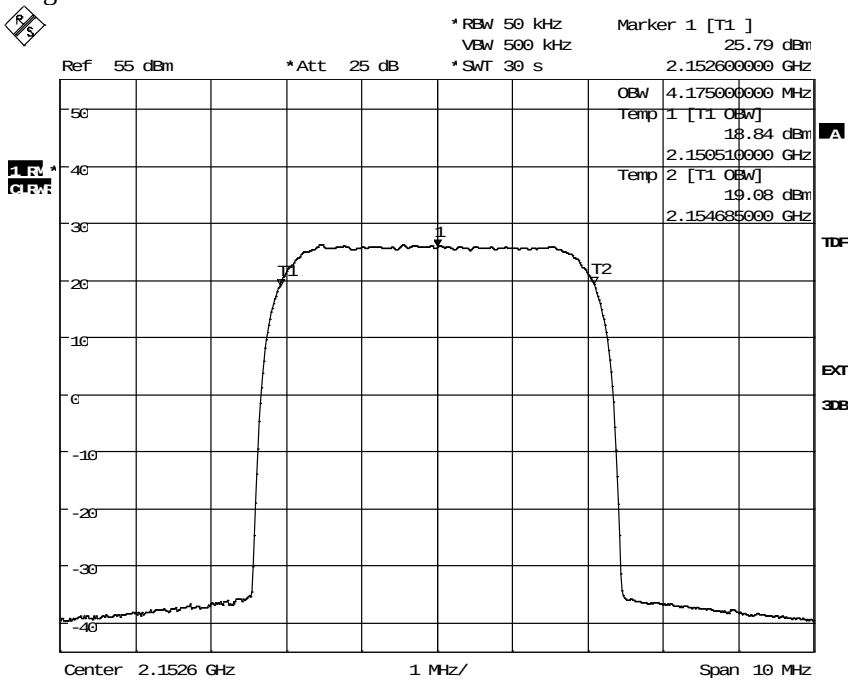
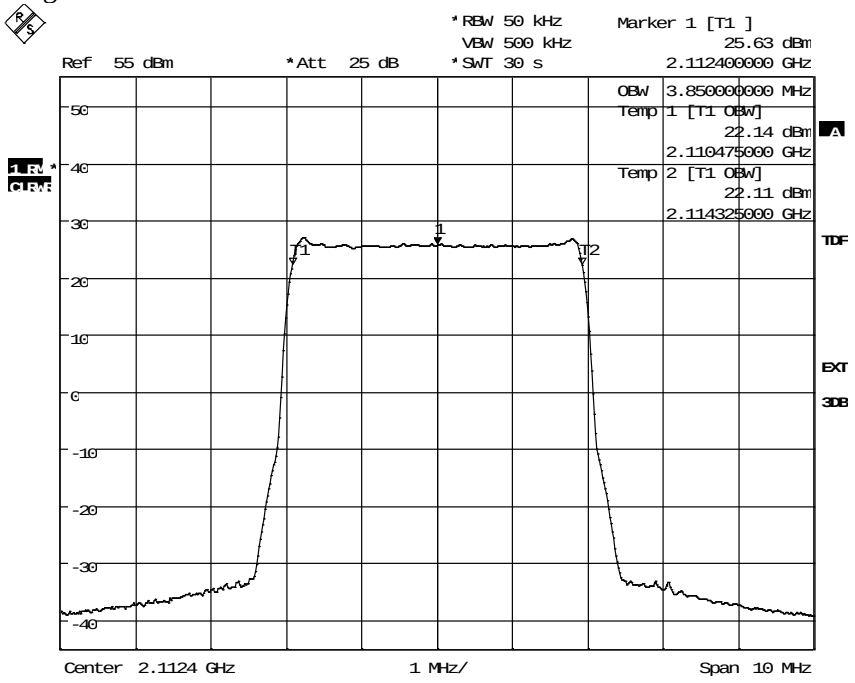
FCC ID: TA8AKRC161254-1 Appendix 3.1
IC: 287AB-AS1612541

Diagram 3



Date: 29.MAR.2011 10:03:49

Diagram 4



Date: 29.MAR.2011 11:05:29

FCC ID: TA8AKRC161254-1 Appendix 3.1
IC: 287AB-AS1612541

Diagram 5

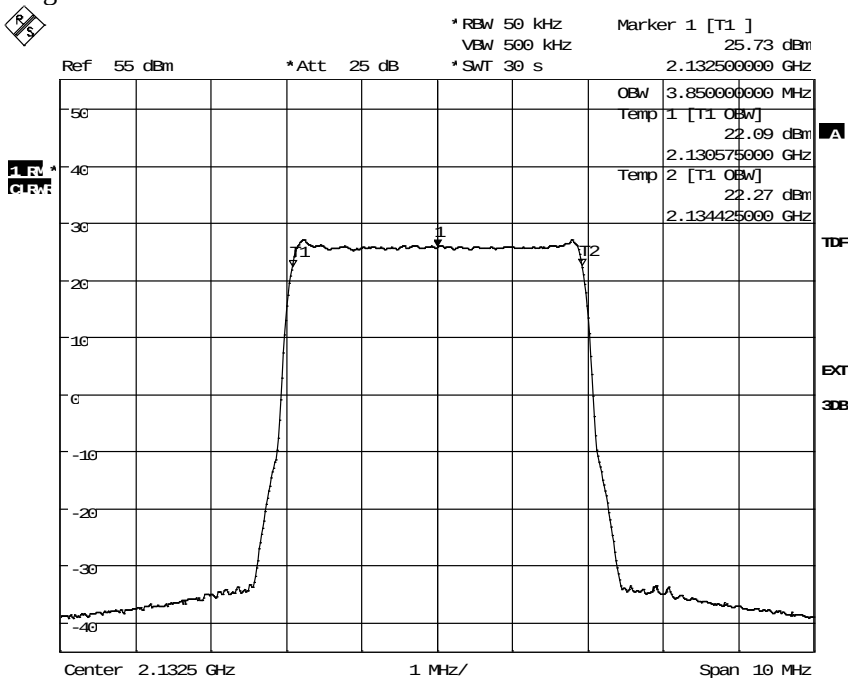


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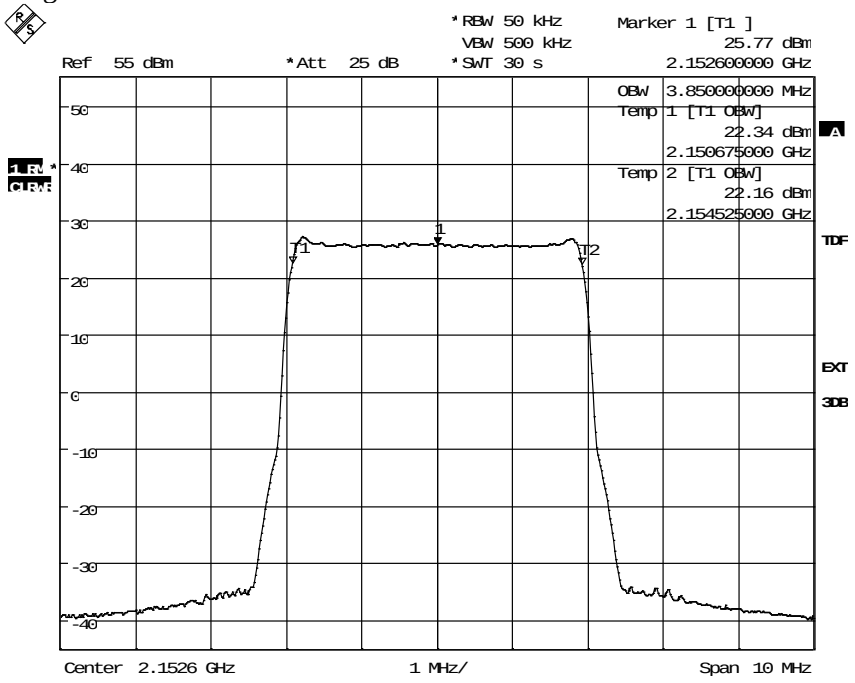
Diagram 6



Date: 29.MAR.2011 11:12:27

Band edge measurements according to CFR 47 §27.53(h) / IC RSS-139 6.5

Date	Temperature	Humidity
2011-03-29	25 °C ± 3 °C	17 % ± 5 %
2011-03-30	24 °C ± 3 °C	16 % ± 5 %

Test set-up and procedure

The measurements were made per definition in §27.53(h). The output was connected to a spectrum analyzer with the RMS detector activated. The spectrum analyzer was connected to an external 10 MHz reference standard during the measurements. A resolution bandwidth of 30 kHz was used up to 5 MHz away from the band edges. 30 kHz is <1% of the Emission BW (4.25 MHz between the 26 dB points for 5 MHz nominal BW setting). To compensate for the reduced measurement bandwidth, the limit was adjusted with 1.5 dB to -14.5 dBm up to 1 MHz away from the band edges and with 15.2 dB to -28.2 dBm from 1 MHz to 5 MHz away from the band edges.

Measurement equipment	SP number
R&S FSQ	504 143
RF attenuator	900 233
Testo 635, temperature and humidity meter	504 203

Measurement uncertainty: 3.7 dB

Results

The results are shown in appendix 4.1

Single carrier:
Diagram 1: B
Diagram 2: T

Multi carrier:
Diagram 3: B+(B+5)
Diagram 4: T+(T-5)

Limits

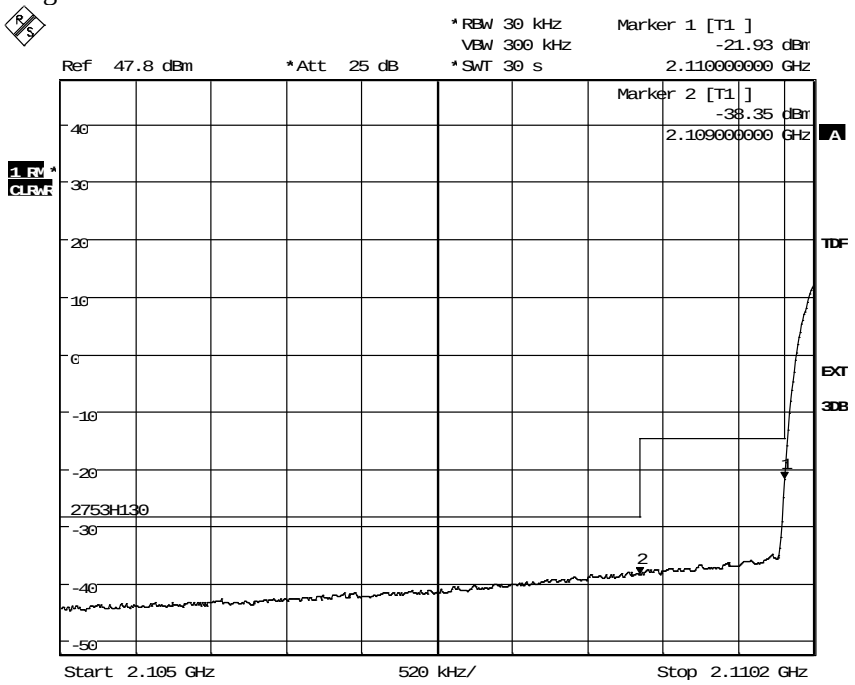
CFR 47 §27.53(h) and RSS-139 6.5

Outside a licensee's frequency band(s) of operation the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, resulting in a limit of -13 dBm.

Complies?	Yes

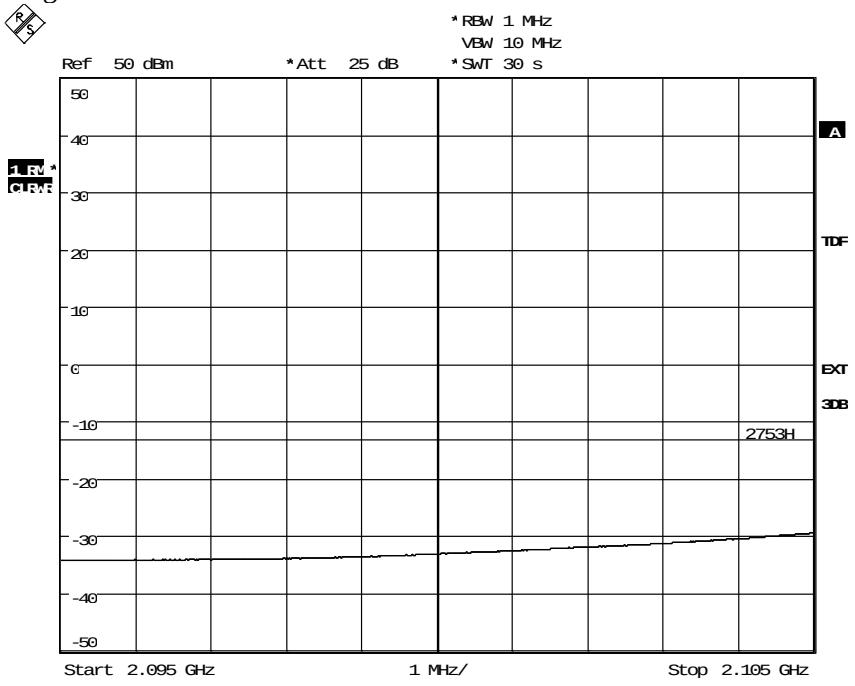
FCC ID: TA8AKRC161254-1 Appendix 4.1
IC: 287AB-AS1612541

Diagram 1a:



Date: 29.MAR.2011 09:26:58

Diagram 1b:



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FCC ID: TA8AKRC161254-1 Appendix 4.1
IC: 287AB-AS1612541

Diagram 2a:

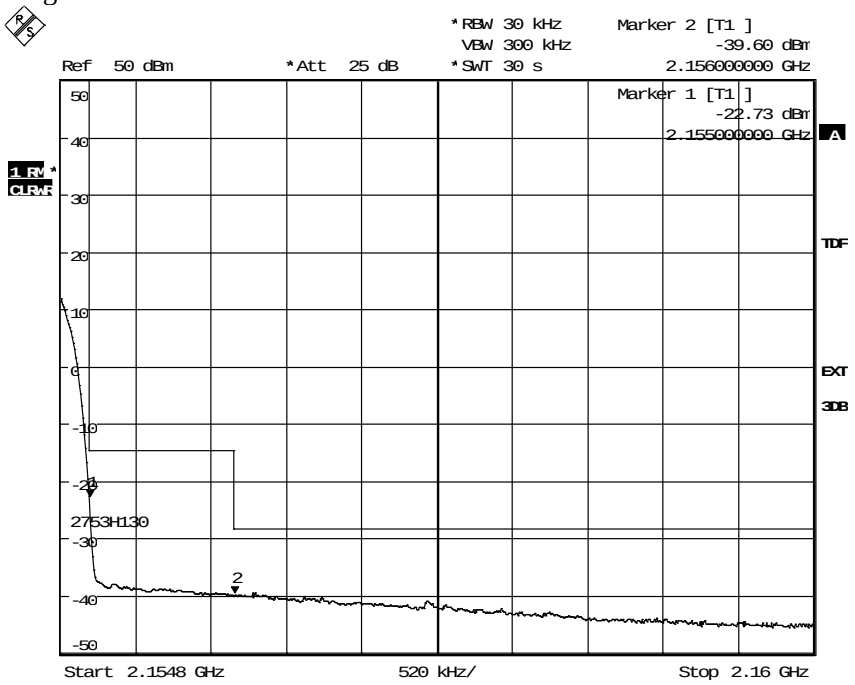

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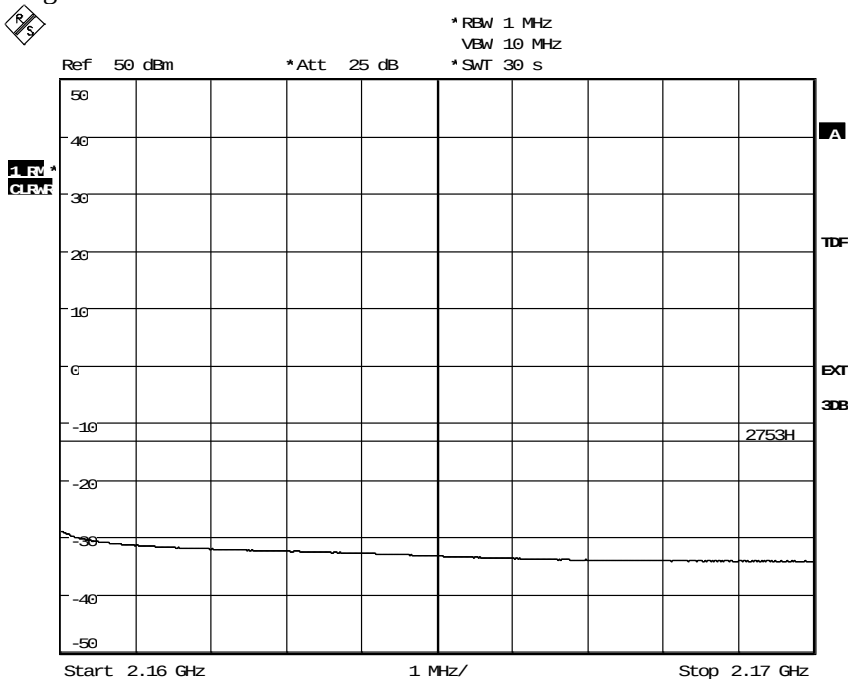
Diagram 2b:



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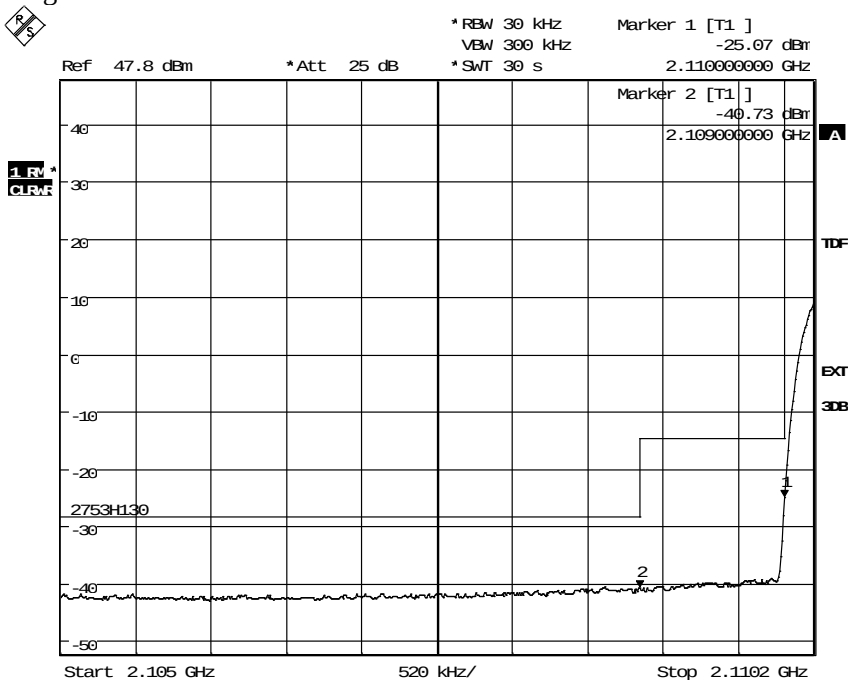
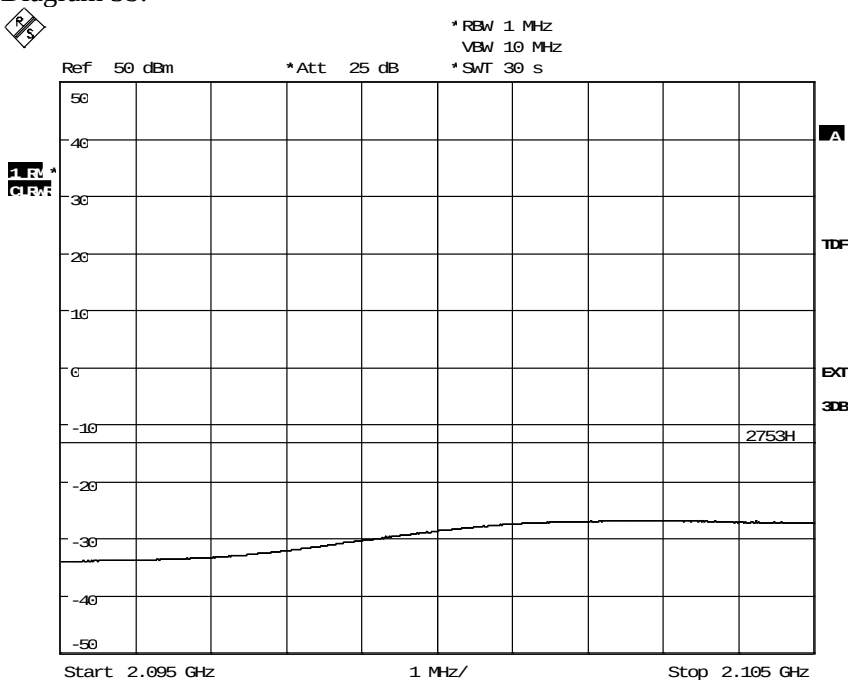
FCC ID: TA8AKRC161254-1 Appendix 4.1
IC: 287AB-AS1612541

Diagram 3a:



Date: 30.MAR.2011 08:47:52

Diagram 3b:



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FCC ID: TA8AKRC161254-1 Appendix 4.1
IC: 287AB-AS1612541

Diagram 4a:

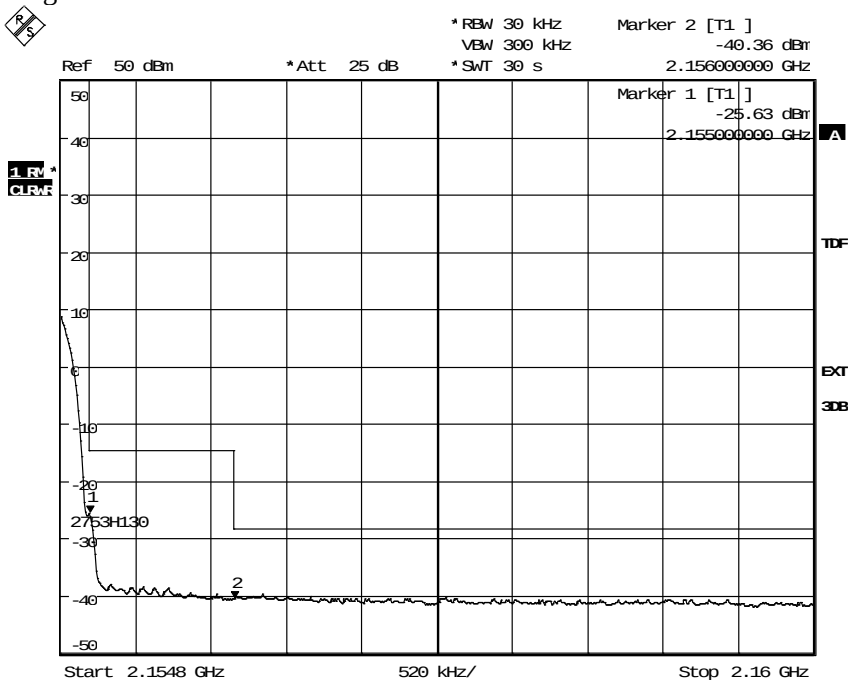

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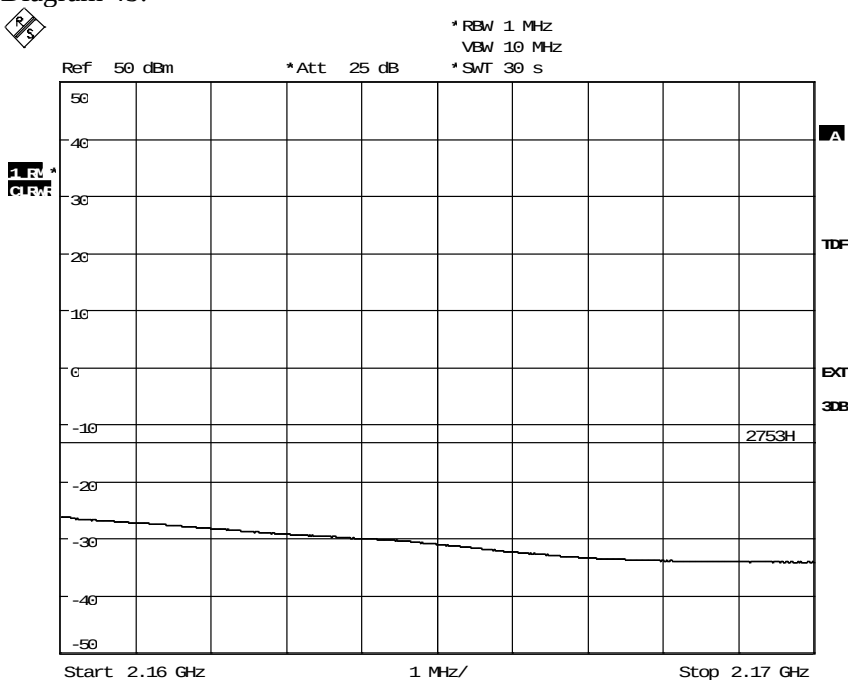
Diagram 4b:



Date: 29.MAR.2011 15:32:11

Conducted spurious emission measurements according to CFR 47 §27.53(h) / IC RSS-139 6.5

Date	Temperature	Humidity
2011-03-29	25 °C ± 3 °C	17 % ± 5 %
2011-03-30	24 °C ± 3 °C	16 % ± 5 %

Test set-up and procedure

The measurements were made per definition in §27.53(h). The output was connected to a spectrum analyzer. The spectrum analyzer was connected to an external 10 MHz reference standard during the measurements. A pre-measurement was performed with the PEAK detector activated. Emission close to or above the limit with the PEAK detector is measured with the RMS detector activated and the level of the emission is determined with the substitution method.

Measurement equipment	SP number
R&S FSQ	504 143
RF attenuator	900 233
High pass filter	504 200
RF attenuator	900 229
High pass filter	503 740
Testo 635 temperature and humidity meter	504 203

Measurement uncertainty: 3.7 dB

Results

The results are shown in appendix 5.1

Single carrier:
Diagram 1: B
Diagram 2: M
Diagram 3: T

Multi carrier:
Diagram 4: B+(B+10)
Diagram 5: T+(T-10)

Remark

The emission at 9 kHz on the plots was not generated by the test object. A complementary measurement with a smaller RBW showed that it was related to the LO feed-through.

The highest internal frequency as declared by the client was 2.4576 GHz, thus the choice of the upper frequency boundary was set to 10x2.5 GHz = 25 GHz for emission measurements.

Limits

§27.53(h) and RSS-139 6.5

Outside a licensee's frequency band(s) of operation the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, resulting in a limit of -13 dBm per 1 MHz RBW.

Complies?	Yes

FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

Diagram 1a

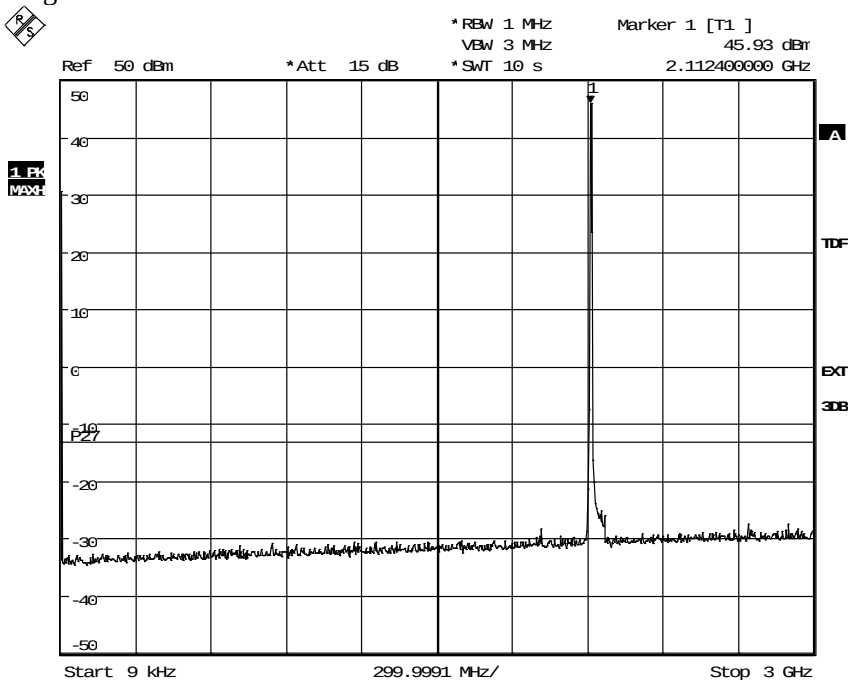


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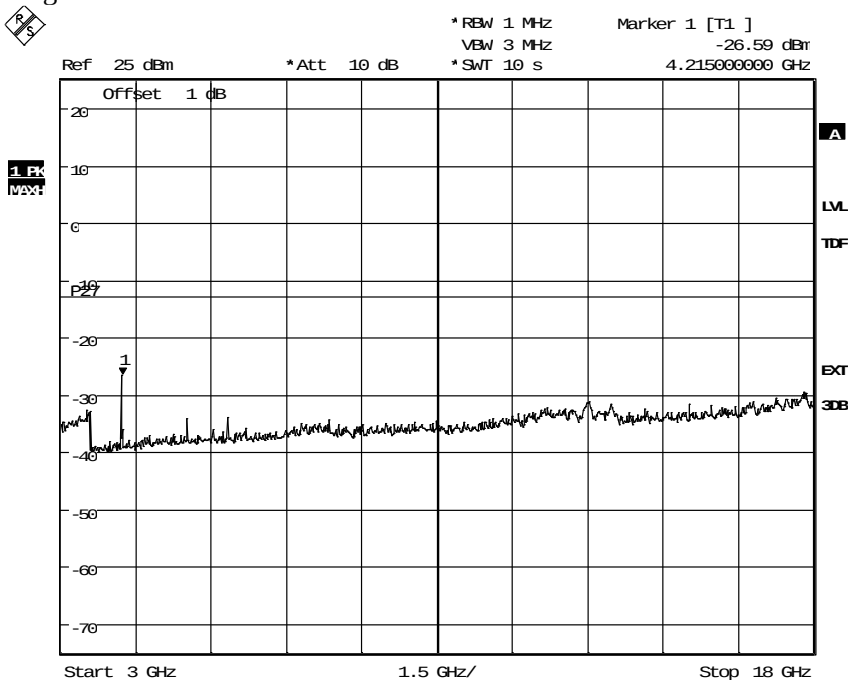
Diagram 1b



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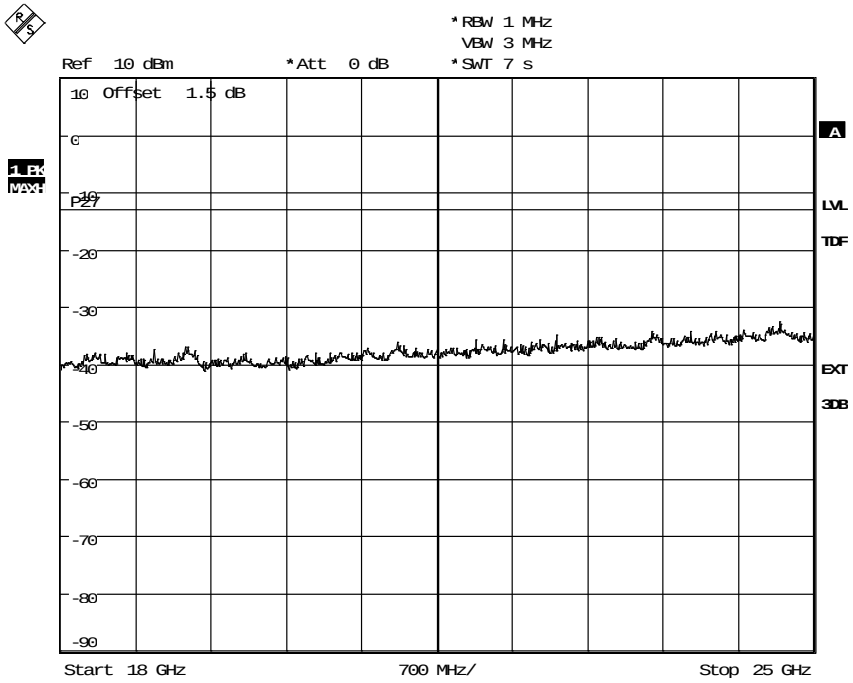
FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

Diagram 1c



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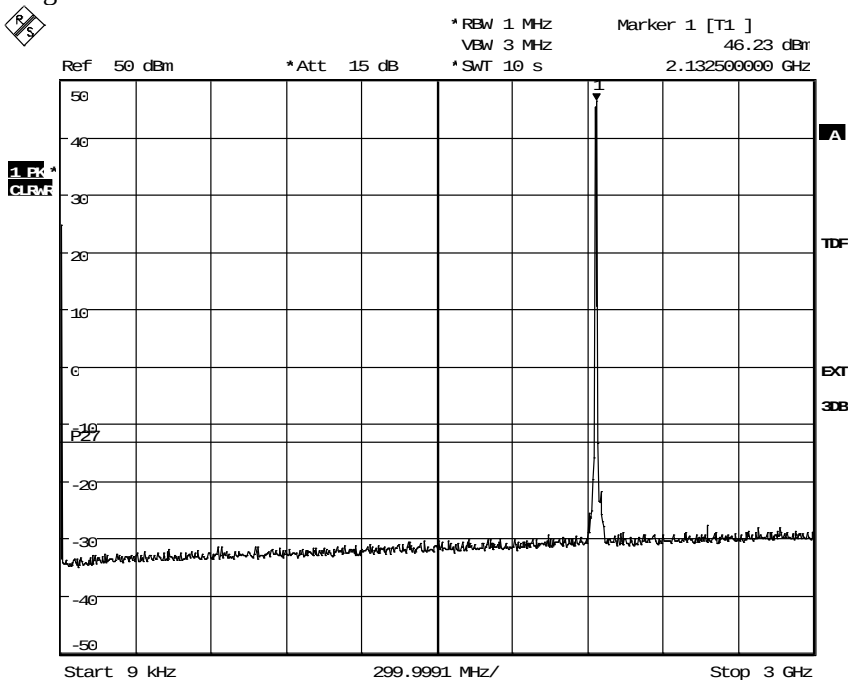
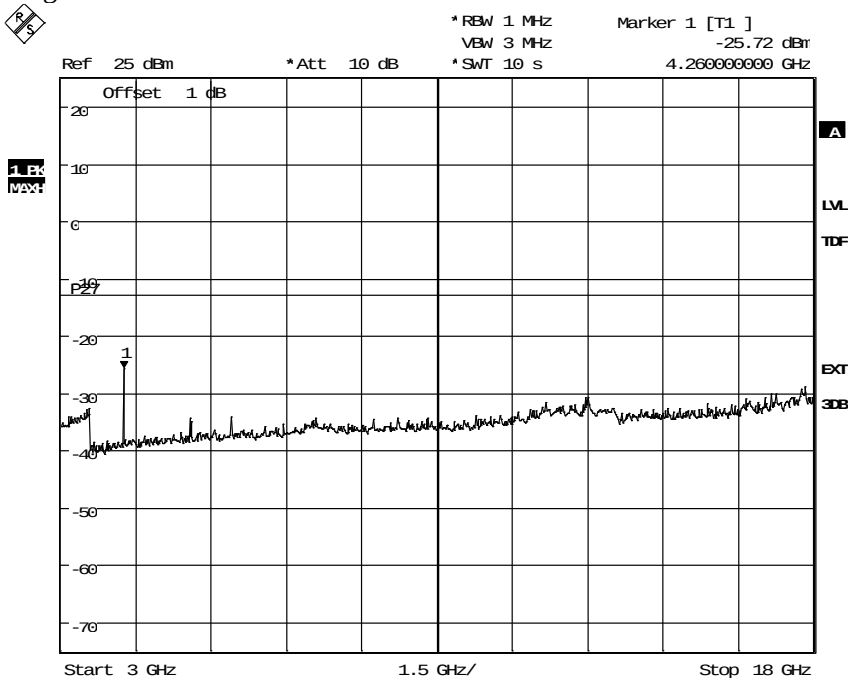
FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

Diagram 2a



Date: 29.MAR.2011 07:15:05

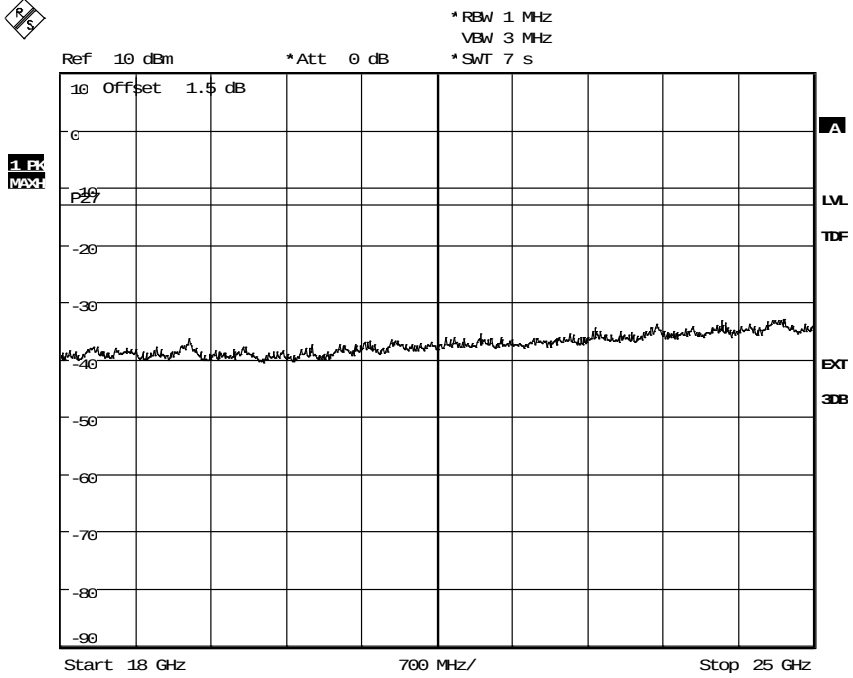
Diagram 2b



Date: 29.MAR.2011 07:28:18

FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

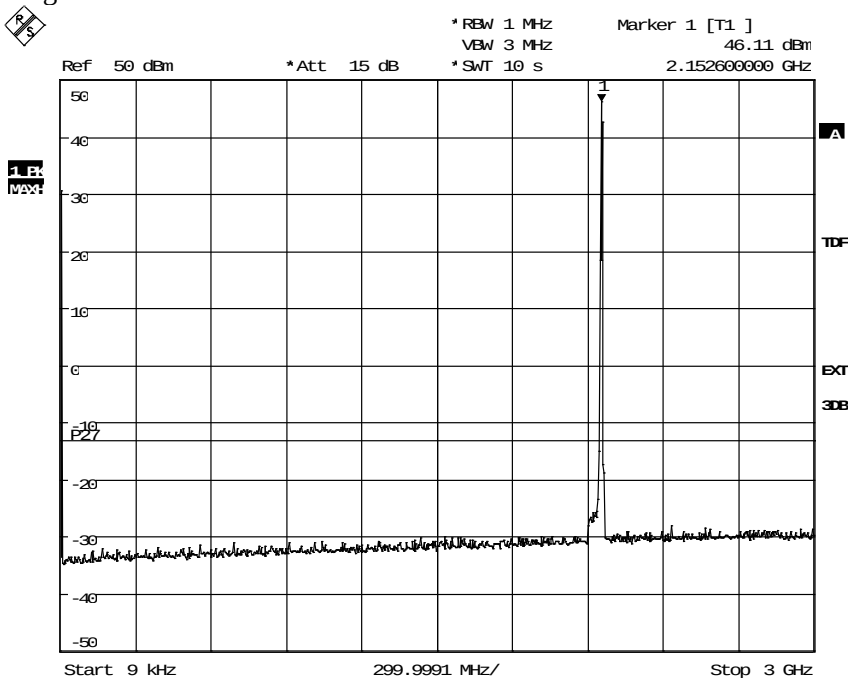
Diagram 2c



Date: 29.MAR.2011 07:36:57

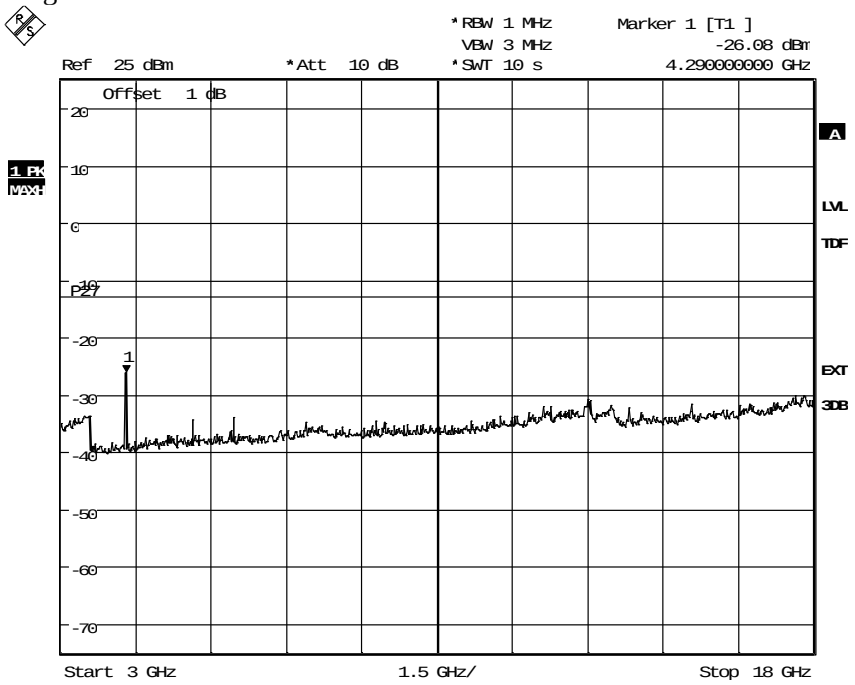
FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

Diagram 3a



Date: 29.MAR.2011 10:05:48

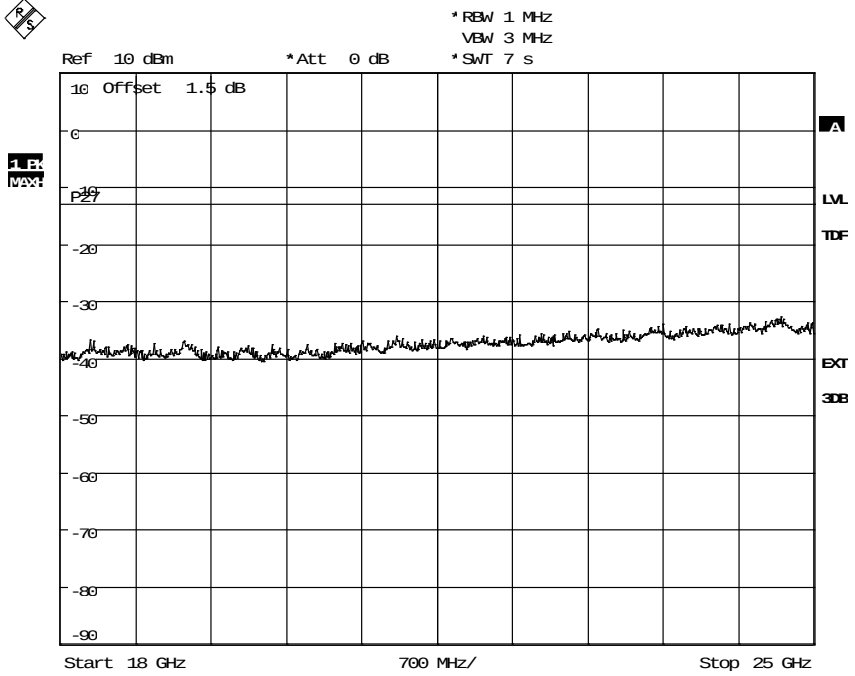
Diagram 3b



Date: 29.MAR.2011 10:19:14

FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

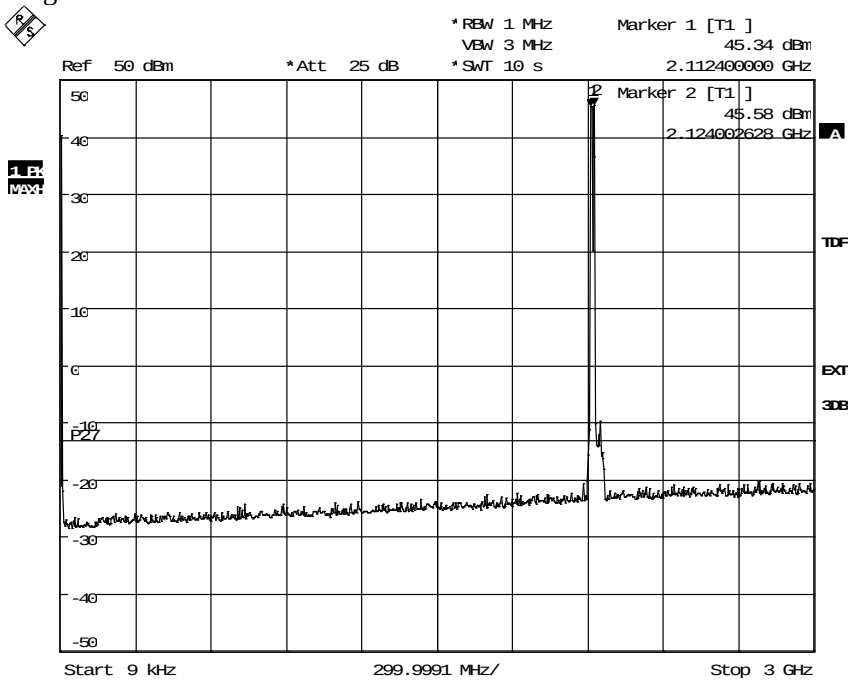
Diagram 3c



Date: 29.MAR.2011 10:23:00

FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

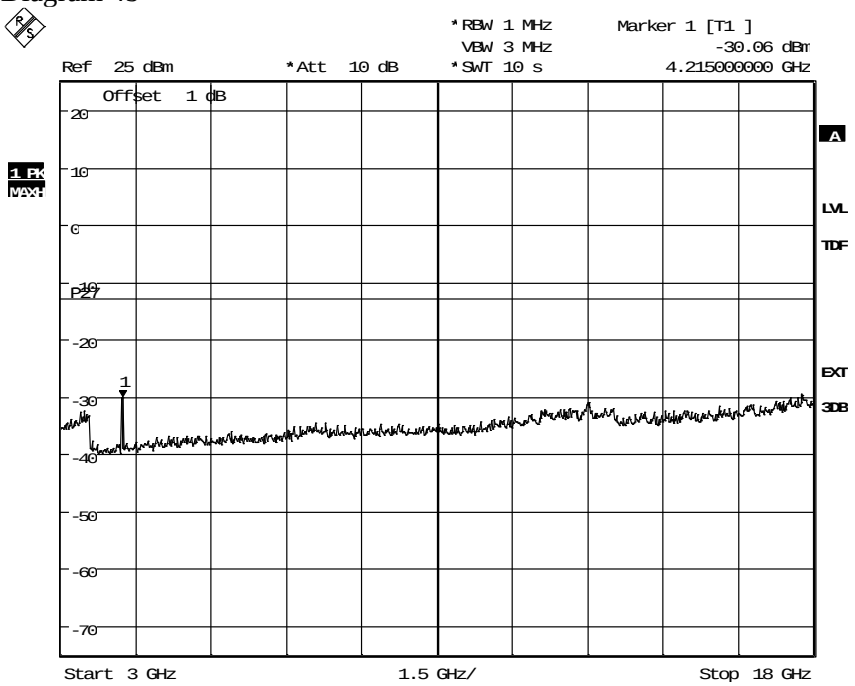
Diagram 4a



Date: 30.MAR.2011 07:54:36

The emissions around the carrier are within the operating frequency band

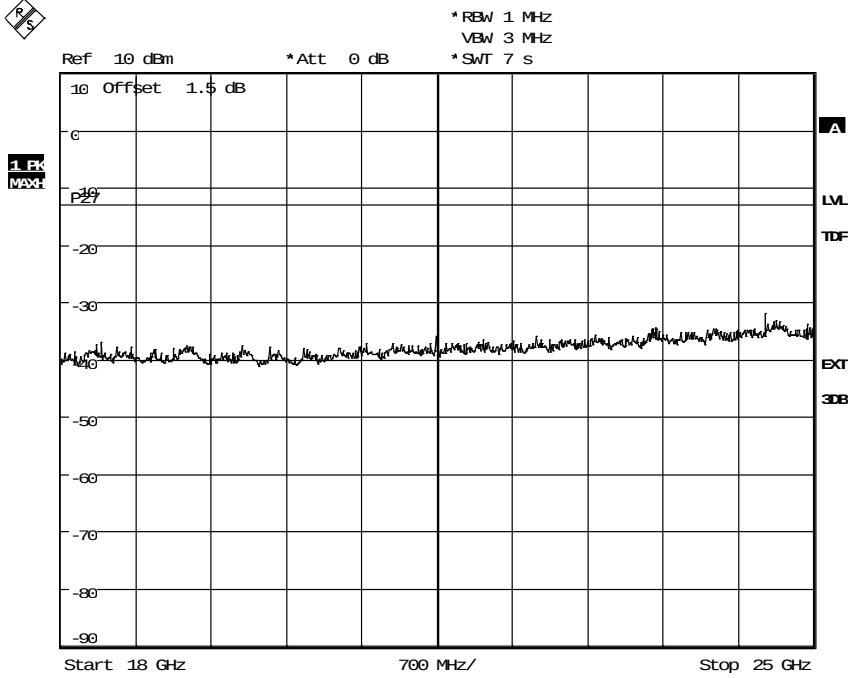
Diagram 4b



Date: 30.MAR.2011 07:36:34

FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

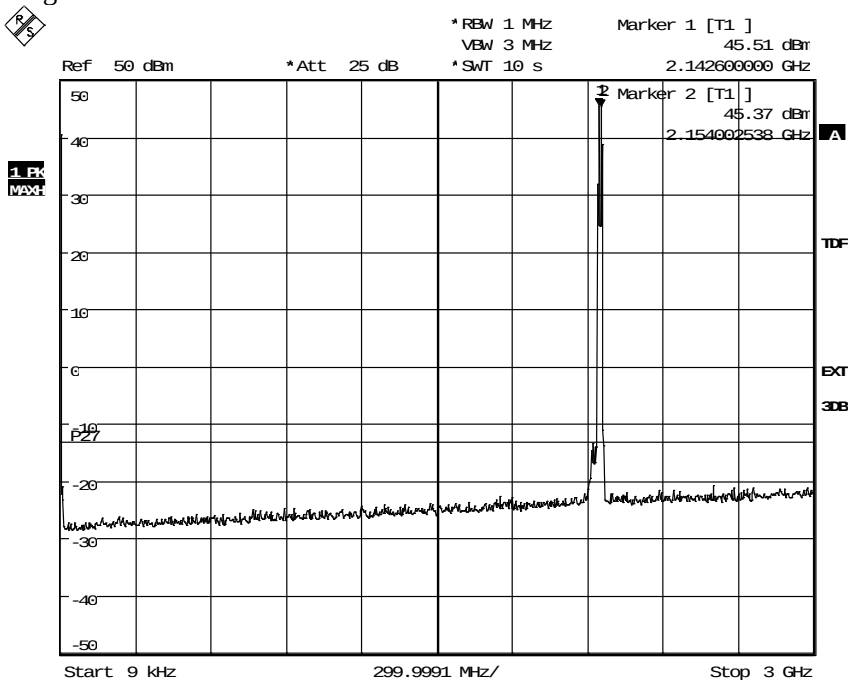
Diagram 4c



Date: 30.MAR.2011 07:32:55

FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

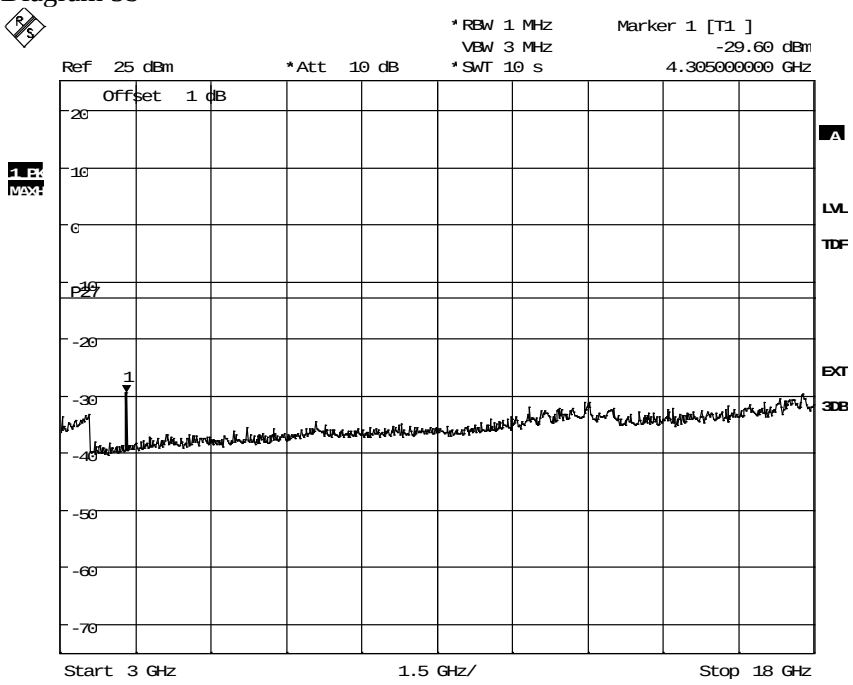
Diagram 5a



Date: 29.MAR.2011 15:41:14

The emissions around the carriers are within the operating frequency band

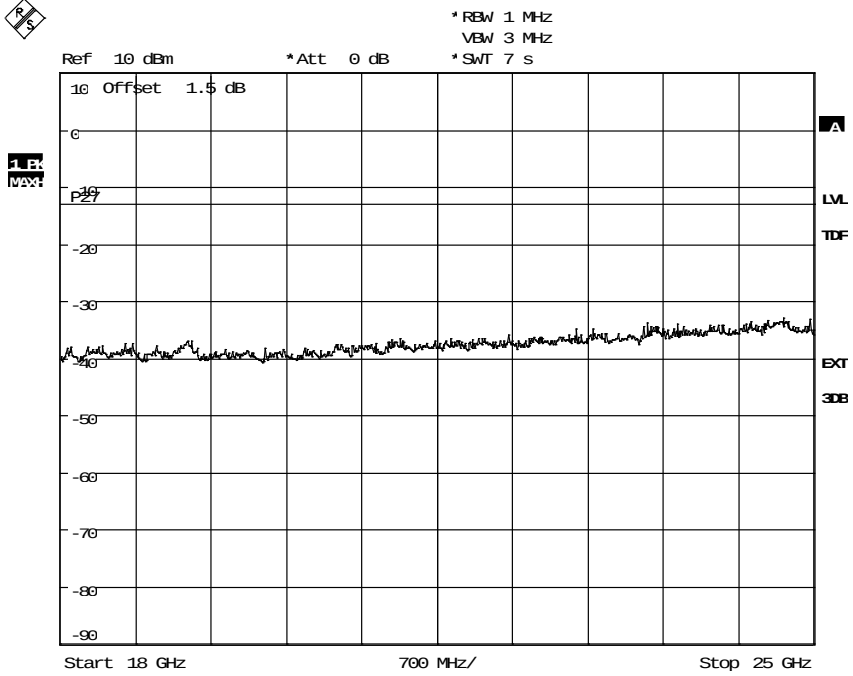
Diagram 5b



Date: 29.MAR.2011 15:51:21

FCC ID: TA8AKRC161254-1 Appendix 5.1
IC: 287AB-AS1612541

Diagram 5c



Date: 29.MAR.2011 15:56:15

FCC ID: TA8AKRC161254-1 Appendix 6
IC: 287AB-AS1612541

Field strength of spurious radiation measurements according to CFR 47 §27.53(h) / IC RSS-139 6.5

Date	Temperature	Humidity
2011-03-21 to 2011-03-24	23-24 °C ± 3 °C	22% to 25 % ± 5 %

Test set-up and procedure

The test sites are listed at FCC, Columbia with registration number: 93866. The test site complies with RSS-Gen, Industry Canada file no. 3482A-1.

The measurements were performed with both horizontal and vertical polarization of the antenna. The antenna distance was 3 m in the frequency range 30 MHz – 18 GHz and 1m in the frequency range 18 - 25 GHz.

In the frequency range 30 MHz - 25 GHz the measurement was performed in power with a RBW of 1 MHz. A propagation loss in free space was calculated. The used formula was $\gamma = 20\log\left(\frac{4\pi D}{\lambda}\right)$, γ is the propagation loss and D is the antenna distance.

The measurement procedure was as the following:

1. The pre-measurement was first performed with peak detector. The EUT was measured in eight directions and with the antenna at three heights, 1.0 m, 1.5 m and 2.0 m.
2. Spurious radiation on frequencies closer than 20 dB to the limit in the pre-measurement is scanned 0-360 degrees and the antenna is scanned 1- 4 m for maximum response. The emission is then measured with the RMS detector and the RMS value is reported. Frequencies closer than 10 dB to the limit when measured with the RMS detector were measured with the substitution method according to the standard.

The test set-up during the spurious radiation measurements.

Measurement equipment

Measurement equipment	SP number
Test site Tesla	503 881
R&S ESI 26	503 292
Control computer	503 479
Software: R&S EMC32, ver. 8.20.1	503 745
Chase Bilog antenna CBL 6111A	503 182
µCorp Nordic, Low Noise Amplifier	504 160
Miteq, Low Noise Amplifier	503 285
EMCO Horn Antenna 3115	502 175
Standard gain antenna 20240-20	503 674
High pass filter, Wainright	504 200
Testo 625 temperature and humidity meter	504 188

The RRUS unit was allocated to the following UARFCN:

Single Carrier: (One carrier configuration)

Cell	1	1	1
Channel	B	M	T

Multi Carrier: (Two carrier configuration)

Cell	1	2
Channel	B	B+10
Channel	T-10	T

Multi Carrier: (Four carrier configuration)

Cell	1	2	3	4
Channel	B	B+5	B+10	B+15
Channel	T	T-5	T-10	T-15

Results

Frequency (MHz)	Spurious emission level (dBm)	
	Vertical	Horizontal
30-25 000	All emission > 20 dB below limit	All emission > 20 dB below limit

Measurement uncertainty:

3.2 dB up to 18 GHz, 3.6 dB above 18 GHz

Limits

§27.53(h) and RSS-139 6.5

Outside a licensee's frequency band(s) of operation the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, resulting in a limit of -13 dBm per 1 MHz RBW.

Complies?	Yes

FCC ID: TA8AKRC161254-1
IC: 287AB-AS1612541

Appendix 7

Frequency stability measurements according to CFR 47 §27.54 / IC RSS 139 6.3

Date	Temperature (test equipment)	Humidity (test equipment)
2011-03-30 to 2011-03-31	23-24°C ± 3 °C	16-19% ± 5 %

Test set-up and procedure

The measurement was made per 3GPP TS 25.141. The output was connected to a spectrum analyzer. The spectrum analyzer was connected to an external 10 MHz reference standard during the measurements.

Measurement equipment	SP number
Climate chamber 2	501 031
Rohde & Schwarz signal analyzer FSQ40	504 143
RF attenuator	504 159
Testo 635, Temperature and humidity meter	504 203
Rotronic temperature and humidity meter	502 946
Multimeter Fluke 87	502 190

Results

Nominal Voltage -48 V DC
Maximum output power at mid channel (M)

Test conditions		Frequency error (Hz)
Supply voltage DC (V)	T (°C)	
-48.0	+20	+6
-55.2	+20	-5
-40.8	+20	-4
-48.0	+30	+7
-48.0	+40	+9
-48.0	+50	-10
-48.0	+10	-4
-48.0	0	-5
-48.0	-10	+6
-48.0	-20	+4
-48.0	-30	-4
Maximum freq. error (Hz)		10
Measurement uncertainty		$< \pm 1 \times 10^{-7}$

Limits

Limit according to 3GPP TS 25.141:
The frequency error shall be within ± 0.05 PPM ± 12 Hz (±118.63).

§27.54
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

RSS-139 6.3 Frequency:
The frequency stability shall be sufficient to ensure that the emission bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

Complies?	Yes

FCC ID: TA8AKRC161254-1
IC: 287AB-AS1612541

Appendix 8

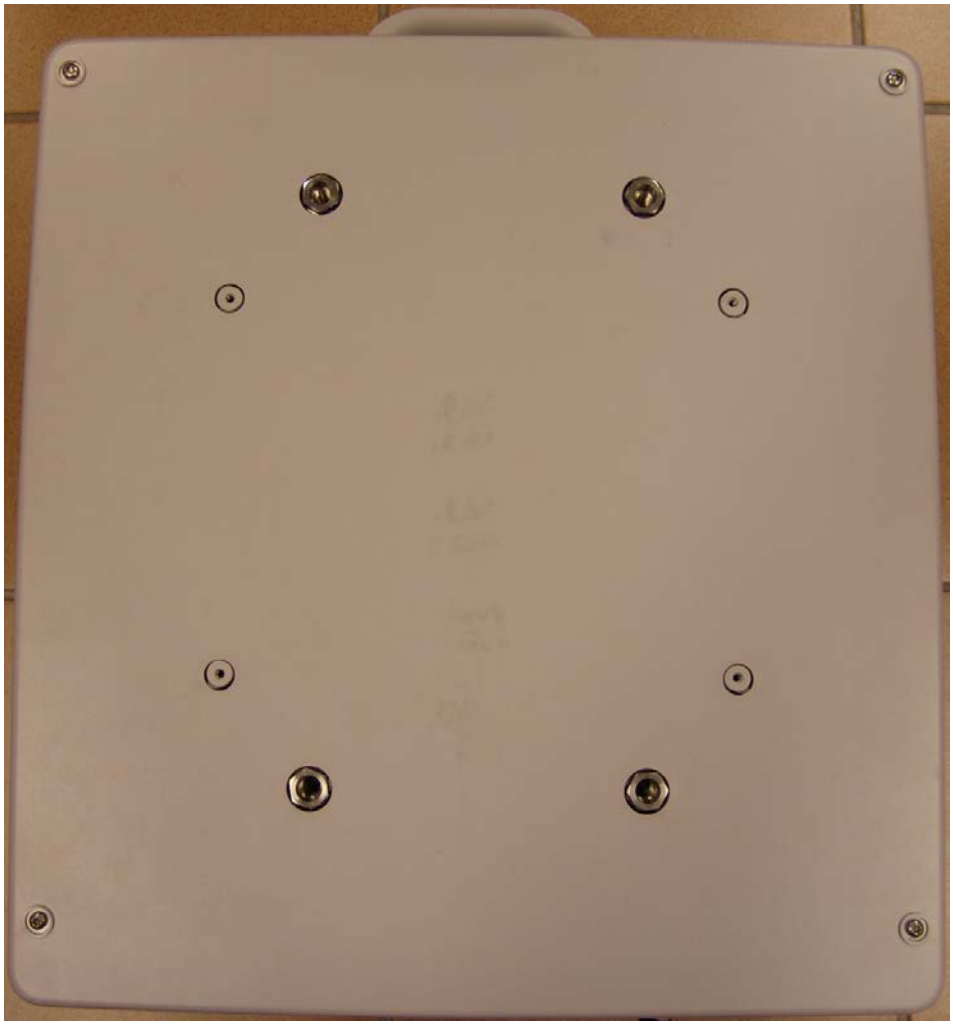
Photos of test object

Front side

FCC ID: TA8AKRC161254-1
IC: 287AB-AS1612541

Appendix 8

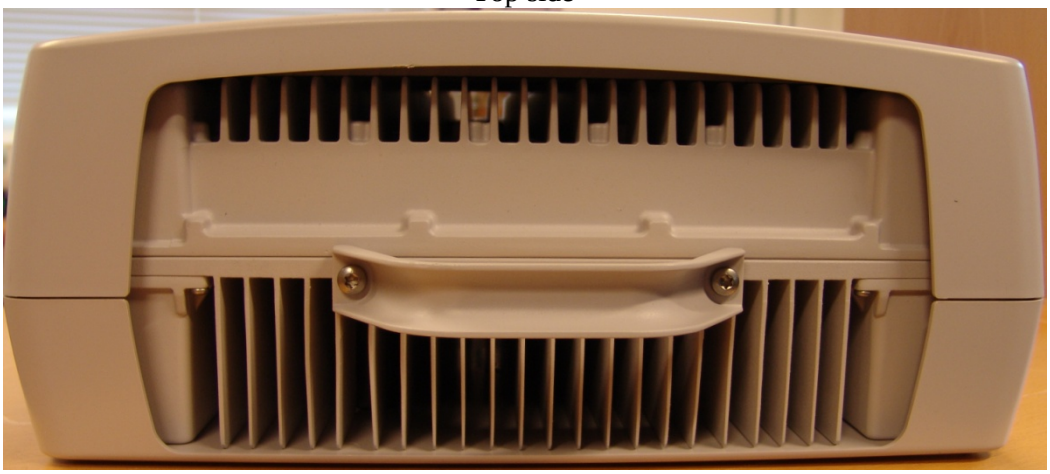
Back side



Left side

Right side

Top side



Bottom side