



Nemko Test Report: 27105RUS1

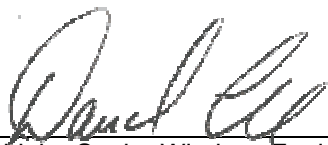
Applicant: AMX
3000 Research Drive
Richardson, TX 75082
USA

**Equipment Under Test:
(E.U.T.)** NXR-ZGW-PRO

FCC Identifier: CWU-NXRZGWPRO

In Accordance With: **FCC Part 15, Subpart C, 15.247 and
RSS 210, Issue 7**
Digital Transmission System Transmitter

Tested By: Nemko USA, Inc.
802 N. Kealy
Lewisville, Texas 75057-3136

TESTED BY: 

David Light, Senior Wireless Engineer **DATE:** 14 May 2009

APPROVED BY: 

Tom Tidwell, Telecom Direct **DATE:** 15 May 2009

Table of Contents

SECTION 1.	SUMMARY OF TEST RESULTS	3
SECTION 2.	EQUIPMENT UNDER TEST (E.U.T.)	5
SECTION 3.	OCCUPIED BANDWIDTH	6
SECTION 4.	MAXIMUM PEAK OUTPUT POWER	9
SECTION 5	SPURIOUS EMISSIONS AT ANTENNA TERMINALS	12
SECTION 6.	RADIATED EMISSIONS	15
SECTION 7.	PEAK POWER SPECTRAL DENSITY	20
SECTION 8.	RECEIVER SPURIOUS EMISSIONS	23
SECTION 9.	POWERLINE CONDUCTED EMISSIONS	25
SECTION 10.	TEST EQUIPMENT LIST	30
ANNEX A -	TEST DETAILS	31
ANNEX B -	TEST DIAGRAMS	39

Section 1. Summary of Test Results

Manufacturer: AMX

Model No.: NXR-ZGW-PRO

Serial No.: None

General: **All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, Subpart C, Paragraph 15.247 and RSS 210, Issue 7 for Digital Transmission Systems. Radiated tests were conducted in accordance with ANSI C63.4-2003. Radiated emissions are made on a listed test site. A description of the test facility is on file with the FCC and Industry Canada.

- | | | | |
|-------------------------------------|----------------------------|-------------------------------------|---------------------|
| <input checked="" type="checkbox"/> | New Submission | <input type="checkbox"/> | Production Unit |
| <input type="checkbox"/> | Class II Permissive Change | <input checked="" type="checkbox"/> | Pre-Production Unit |

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See " Summary of Test Data".



Nemko USA Inc. authorizes the above named company to reproduce this report provided it is reproduced in its entirety and for use by the company's employees only.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Nemko USA Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This report applies only to the items tested.

Summary Of Test Data

NAME OF TEST	PARA. NO.	RESULT
Powerline Conducted Emissions	15.207(a), RSS GEN 7.2.2	Complies
Minimum 6 dB Bandwidth	15.247(a)(2), RSS 210 A8.2(a)	Complies
Maximum Peak Power Output	15.247(b)(3), RSS 210 A8.4(4)	Complies
Spurious Emissions (Antenna Conducted)	15.247(d), RSS 210 A8.5	Complies
Spurious Emissions (Restricted Bands)	15.247(d)/15.209(a), RSS 210, Table 1	Complies
Receiver Spurious Emissions	RSS GEN, 7.2.3	Complies
Peak Power Spectral Density	15.247(e), RSS 210 A8.2(b)	Complies
Receiver Spurious Emissions	RSS-Gen 7.2.3	Complies

Description of DUT:

The NXR-ZGW-PRO is a ZigBee wireless gateway.

Section 2. Equipment Under Test (E.U.T.)

General Equipment Information

Frequency Band (MHz):	902-928	2400-2483.5	5725-5850
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Operating Frequency of Test Sample: 2405 to 2480 MHz

Channel Spacing: 5 MHz

User Frequency Adjustment: Software controlled

Section 3. Occupied Bandwidth

NAME OF TEST: Occupied Bandwidth	PARA. NO.: 15.247(a)(2)
TESTED BY: David Light	DATE: 13 April 2009

Test Results: Complies.

Measurement Data: See 6 dB BW plot
Measured 6 dB bandwidth: 1.58 MHz
Channel Separation: 5 MHz

Test Conditions: 35 %RH
22 °C

Measurement Uncertainty: +/-1x10⁻⁷ ppm

Test Equipment Used: 1082-1464-1472

Section 4. Maximum Peak Output Power

NAME OF TEST: Maximum Peak Output power	PARA. NO.: 15.247(b)(3)
TESTED BY: David Light	DATE: 13 April 2009

Test Results: Complies.

Measurement Data: Refer to attached data

Test Conditions: 22 %RH
35 °C

Measurement Uncertainty: +/-1.7 dB

Test Equipment Used: 1082-1464-1472

This device was tested at +/- 15% input power per 15.31(e), with no variation in output power.

The power was varied on the regulated power supply provided with the radio.

The device was tested on three channels per 15.31(l).

Section 5 Spurious Emissions at Antenna Terminals

NAME OF TEST: Spurious Emissions at Antenna Terminals	PARA. NO.: 15.247 (d)
TESTED BY: David Light	DATE: 13 April 2009

Test Results: Complies.

Measurement Data: See attached plots.

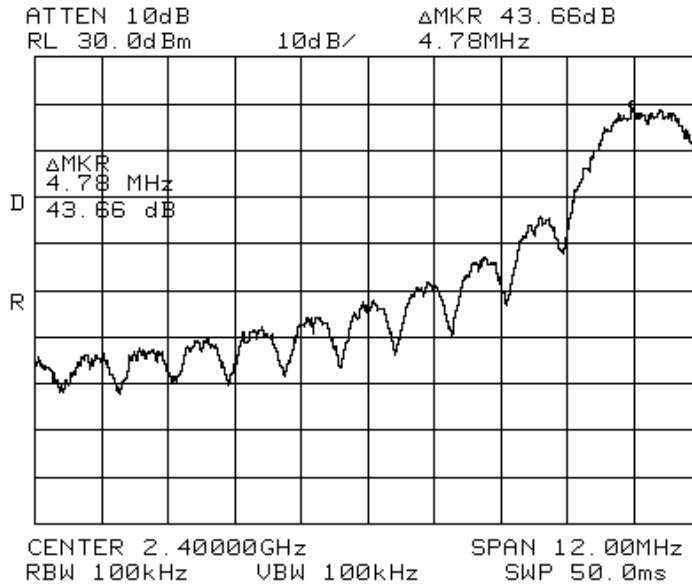
Test Conditions: 22 %RH
 35 °C

Measurement Uncertainty: +/-1.7 dB

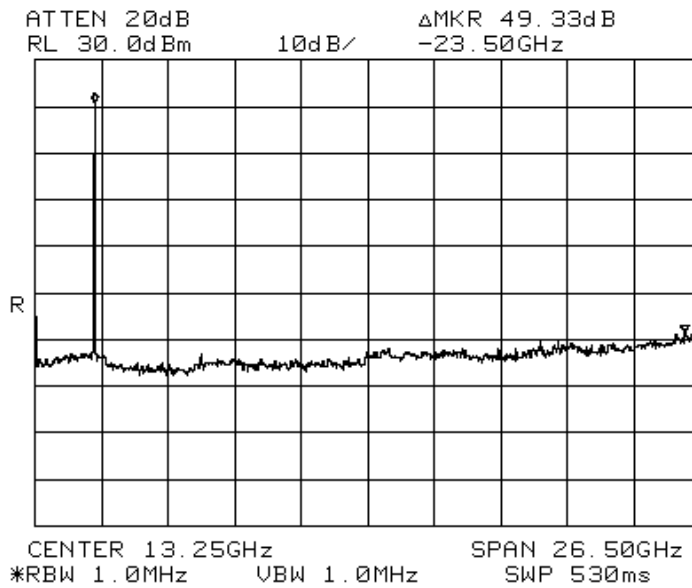
Test Equipment Used: 1082-1464-1472

Test Data – Spurious Emissions at Antenna Terminals

Lower Band Edge

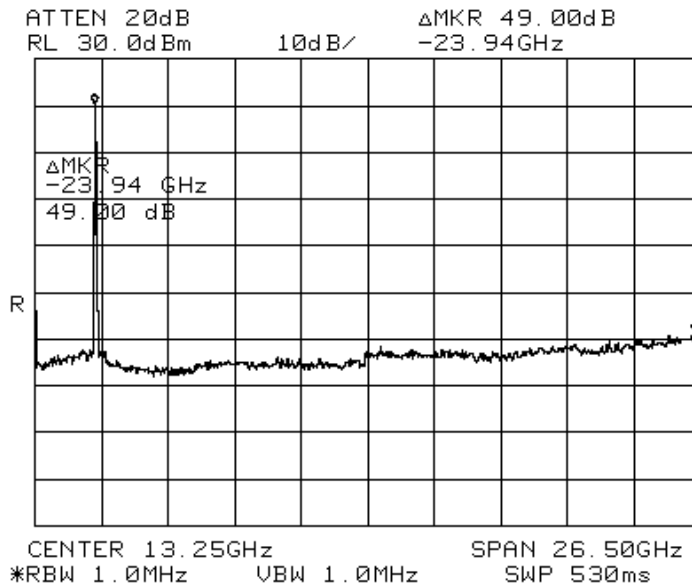


Low Channel Spurs

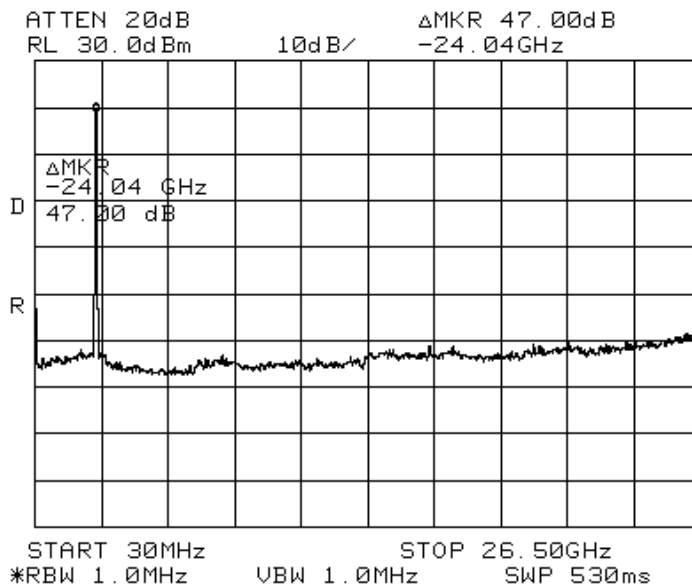


Test Data – Spurious Emissions at Antenna Terminals

Mid Channel



Highest Channel



Section 6. Radiated Emissions

NAME OF TEST: Radiated Emissions	PARA. NO.: 15.247 (d)
TESTED BY: David Light	DATE: 06 May 2009

Test Results: Complies.

Measurement Data: See attached table.

Test Conditions: 22 %RH
35 °C

Measurement Uncertainty: +/-1.7 dB

Test Equipment Used: 1763-1767-1783-1785-993

Notes:

- For handheld devices, the EUT was tested on three orthogonal axis'
- The device was tested from 30 MHz to the tenth harmonic of the highest fundamental frequency per 15.33
- The device was tested on three channels per 15.31(l).
- No emissions were detected within 20 dB of the specification limit therefore none are reported per 15.31(o). Band edge data is presented below.

RBW=VBW=100 kHz below 1000 MHz, Peak Detector
RBW=VBW=1 MHz < 1000 MHz, Peak Detector (Peak Readings)
RBW= 1 MHz, VBW=10Hz, Peak Detector (Average Readings)

The carrier was modulated over 99% (no duty cycle) for testing purposes.

Radiated Emissions

Pulse W1030 antenna (2 dBi)

Upper Band Edge

Freq MHz	Rdng dBμV	Pre-A 10dB dB	Horn Duty dB	Cable dB	Cable dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
2483.5	57.0	-32.8	+29.0	+0.8	+2.3	+0.0	66.3	74.0	-7.7	Vert
		+10.0								
2483.5	57.0	-32.8	+29.0	+0.8	+2.3	+0.0	52.1	54.0	-1.9	Vert
	Ave	+10.0	-14.2							
2483.5	52.0	-32.8	+29.0	+0.8	+2.3	+0.0	61.3	74.0	-12.7	Horiz
		+10.0								
2483.5	52.0	-32.8	+29.0	+0.8	+2.3	+0.0	47.1	54.0	-6.9	Horiz
	Ave	+10.0	-14.2							

Spurs

Frequency GHz	FCC 15.209 Limits dBμV/m	Reading dBμV/m	Margin dB	Polarity	Channel
7440	54	42.9	-11.1	H	Upper
7440	54	42.5	-11.5	V	Upper
7320	54	41.4	-12.6	H	Mid
7320	54	46.8	-7.2	V	Mid
7215	54	49.4	-4.6	H	Low
7215	54	50.7	-3.3	V	Low

All readings are peak unless otherwise noted.

All readings within 20 dB of the specification limit are reported per CFR 47, paragraph 15.31(o).

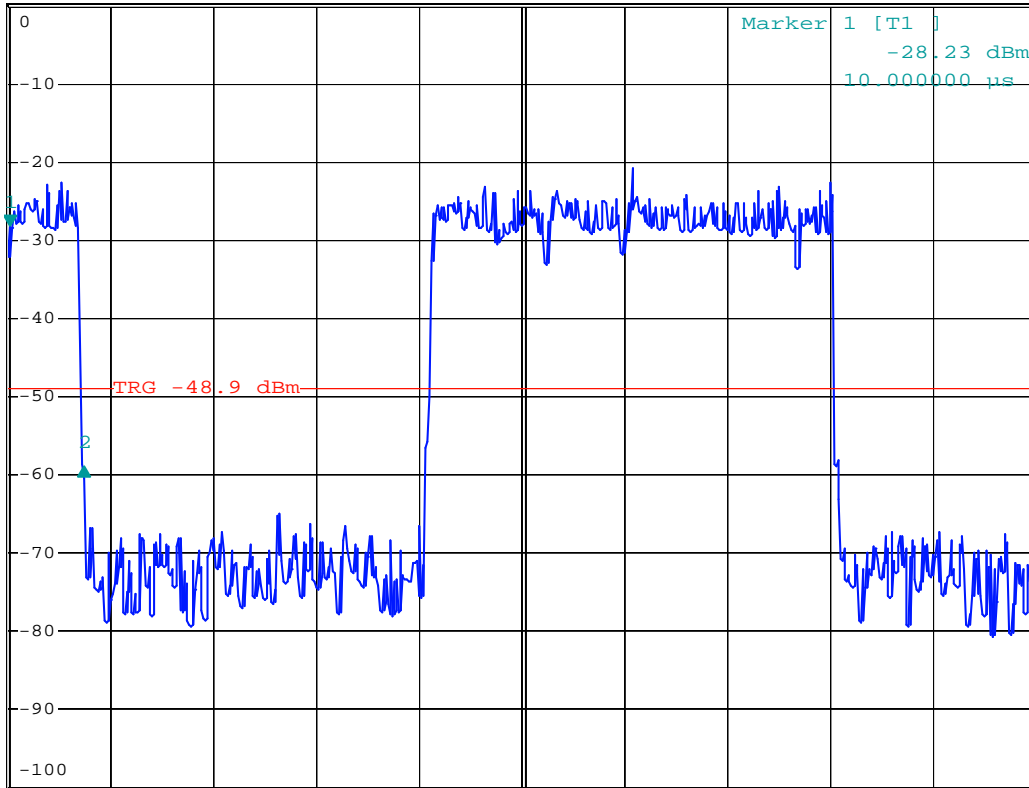
Radiated Emissions



DELTA MARKER 2
360 μ s
Ref 0 dBm Att 30 dB

RBW 100 kHz Delta 2 [T1]
VBW 300 kHz -30.78 dB
SWT 5 ms 360.000000 μ s

1 PK*
VIEW



Center 2.48 GHz 500 μ s/

Date: 6.MAY.2009 10:35:32

Narrow pulse = 360 μ s

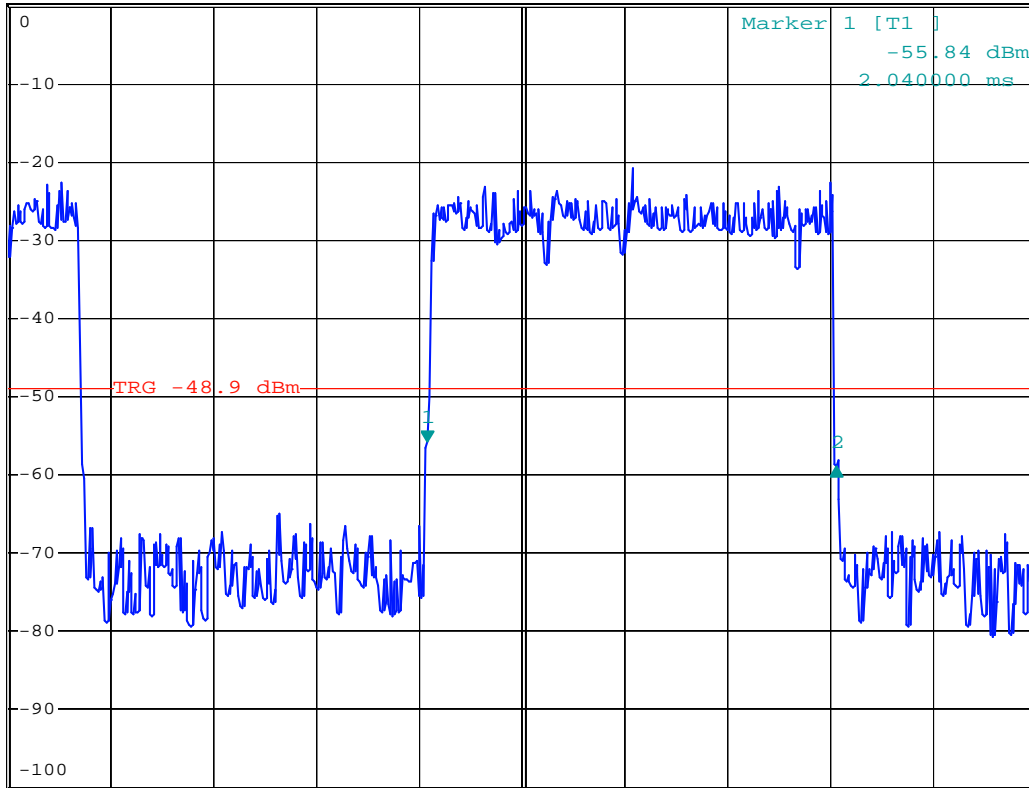
Radiated Emissions



DELTA MARKER 2
1.99 ms
Ref 0 dBm Att 30 dB

RBW 100 kHz Delta 2 [T1]
VBW 300 kHz -2.96 dB
SWT 5 ms 1.990000 ms

1 PK*
VIEW

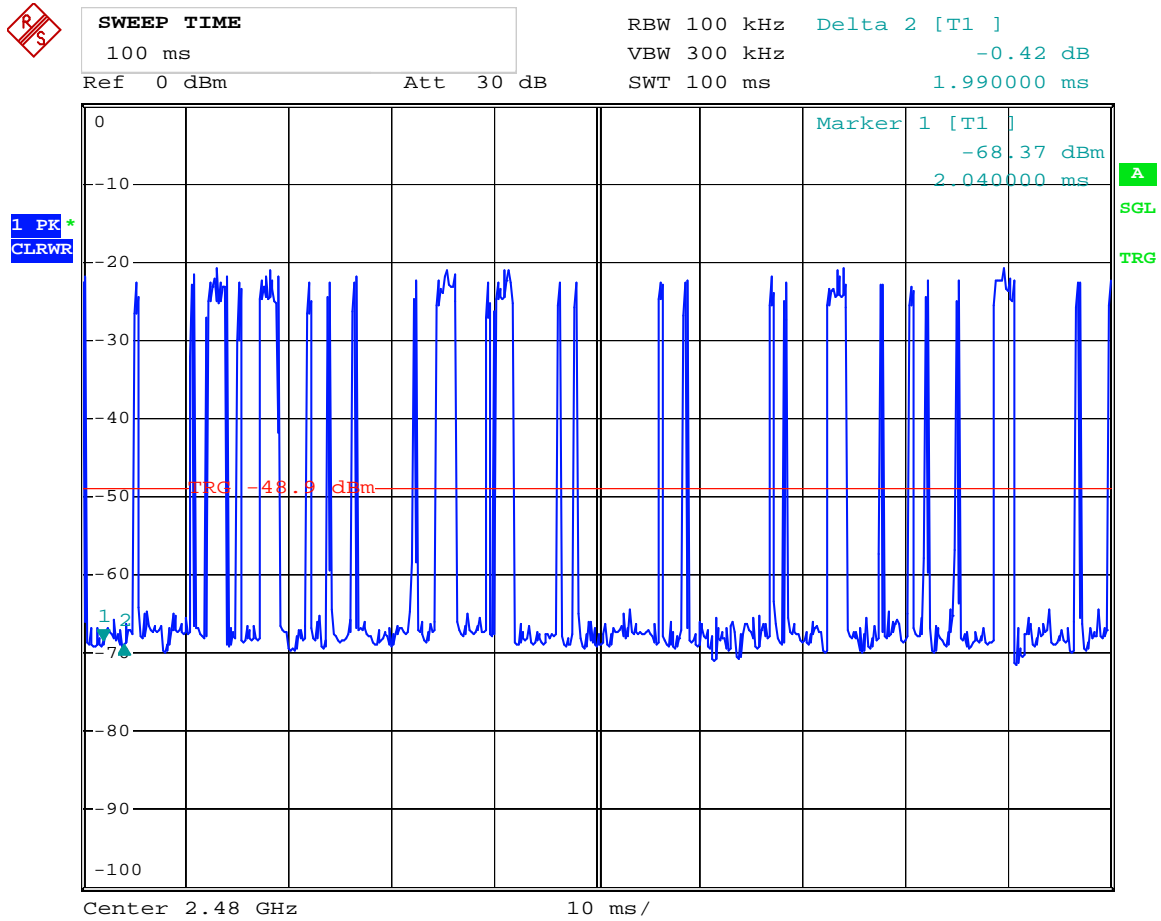


Center 2.48 GHz 500 μs/

Date: 6.MAY.2009 10:36:34

Wide pulse = 1.99 mS

Radiated Emissions



Date: 6.MAY.2009 10:37:35

21 narrow pulses = 7.56 mS

6 wide pulses = 11.94 mS

Duty Cycle Correction = $20 \log (19.5 \text{ mS}/100 \text{ mS}) = -14.2 \text{ dB}$

Section 7. Peak Power Spectral Density

NAME OF TEST: Peak Power Spectral Density	PARA. NO.: 15.247(e)
TESTED BY: David Light	DATE: 13 April 2009

Test Results: Complies.

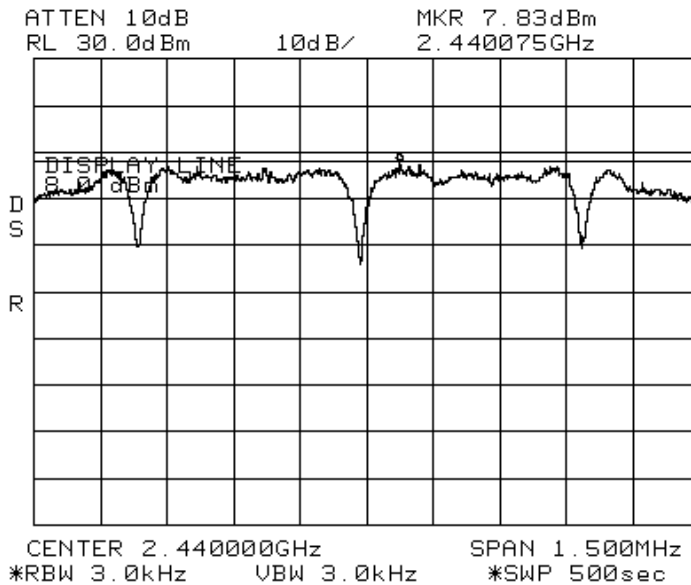
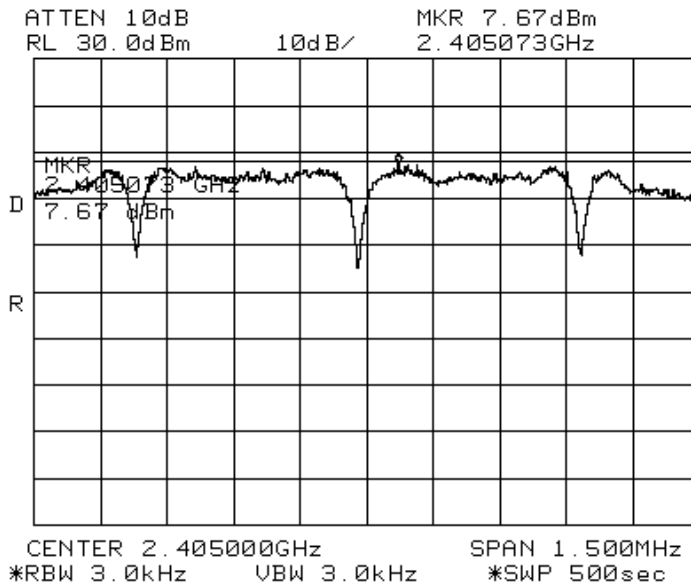
Measurement Data: See attached data..

Test Conditions: 22 %RH
35 °C

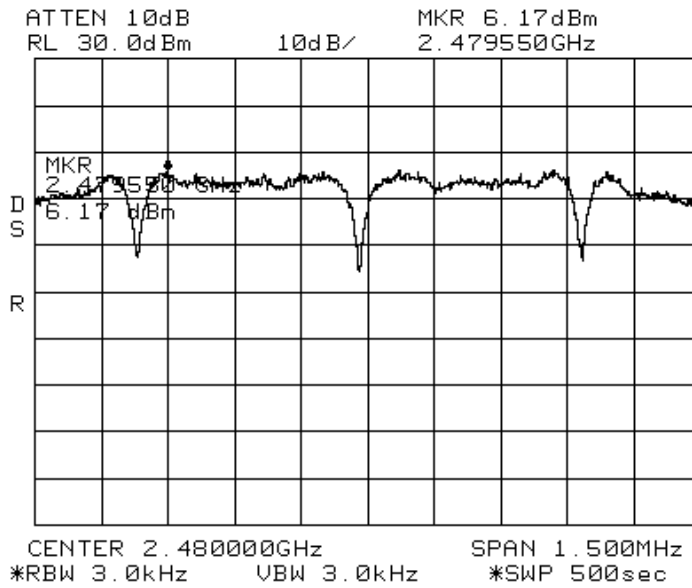
Measurement Uncertainty: +/-1.7 dB

Test Equipment Used: 1082-1472-1464

Peak Power Spectral Density



Peak Power Spectral Density



Section 8. Receiver Spurious Emissions

NAME OF TEST: Receiver Spurious Emissions	PARA. NO.: RSS-Gen 7.2.3
TESTED BY: Scott Oates	DATE: 06 April 2009

Test Results: Complies. The worst case emissions is 44.3 dB μ V/m at 858 MHz. This is 1.7 dB below the specification limit of 46 dB μ V/m.

Measurement Data: See chart.

Test Conditions: 23 %RH
34 °C

Measurement Uncertainty: +/-2.8 dB

Test Equipment Used: 1763-1783-1785-1767-993

Test Data – Receiver Spurious Emissions

Nemko, Lewisville, TX
 FCC 3 Meter Chamber
 Final Quasi Peak Measurements
 Model Number: NXR-ZGW
 Company: AMX
 04:49:16 PM, Monday, April 06, 2009

Frequency MHz	Limit Limit	Horizontal QP	Horizontal Margin	Vertical QP	Vertical Margin
67.6	40.0			21.1	-18.9
71.3	40.0			20.9	-19.1
132.0	43.5	24.3	-19.2	28.5	-15.0
138.9	43.5	20.7	-22.8		
142.6	43.5	22.2	-21.3		
146.4	43.5	22.3	-21.2	24.1	-19.4
198.0	43.5	34.8	-8.7		
198.0	43.5			30.3	-13.2
330.0	46.0	40.4	-5.6	34.7	-11.3
462.0	46.0			26.6	-19.4
462.0	46.0	30.4	-15.6		
594.0	46.0	44.1	-1.9	40.8	-5.2
726.0	46.0			30.3	-15.7
858.0	46.0	44.3	-1.7	41.1	-4.9
990.0	46.0	37.2	-8.8		

The spectrum was searched from 30 MHz to the fifth harmonic of the LO. There were no emissions above 1000 MHz.

Section 9. Powerline Conducted Emissions

NAME OF TEST: Powerline Conducted Emissions	PARA. NO.: 15.207(a)
TESTED BY: David Light	DATE: 14 May 2009

Test Results: Complies.

Measurement Data: See attached plots.

Test Conditions: 22 %RH
35 °C

Measurement Uncertainty: +/-1.7 dB

Test Equipment Used: 1659, 1627, 545

Standard test voltage = 120 Vac

Power Supply Info:

Manufacturer: GLOBTEK, INC. Part #: GS-1216(R).
Part number: GS-1216(R)

Test Data – Powerline Conducted Emissions

L1
Peak

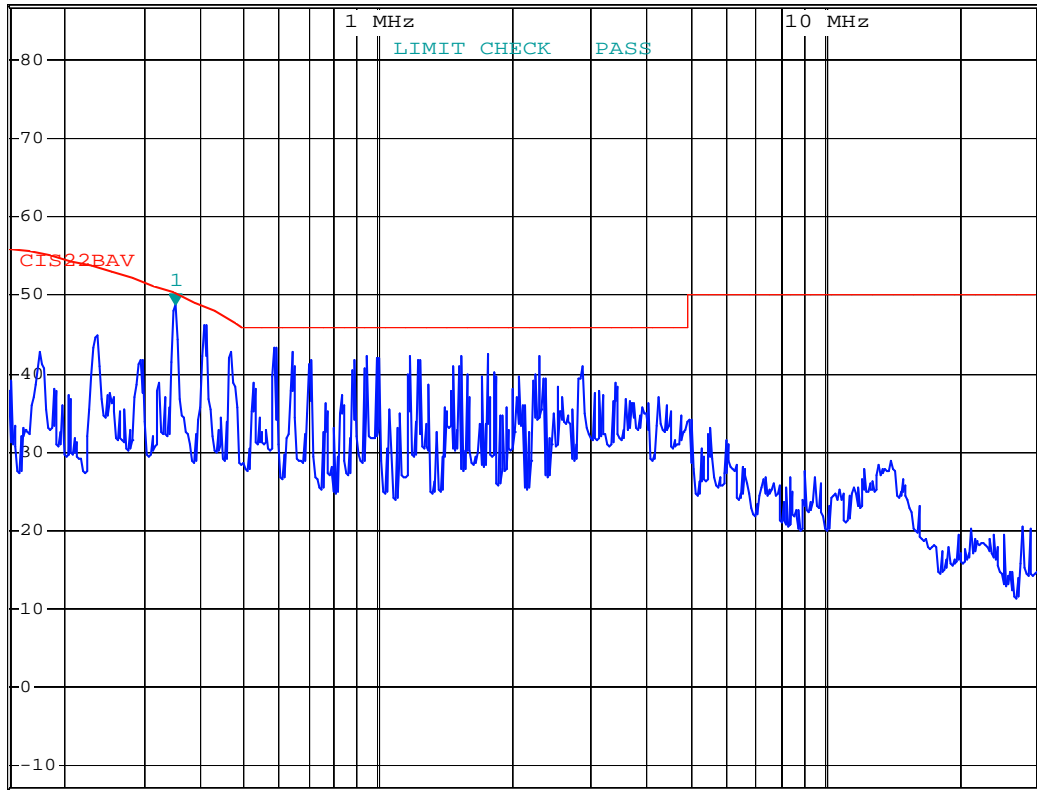


*RBW 10 kHz Marker 1 [T1]
VBW 30 kHz 48.80 dBµV
SWT 300 ms 353.881710965 kHz

Ref 87 dBµV

Att 10 dB

1 PK
VIEW



Center 2.121320344 MHz

Span 29.85 MHz

Date: 14.MAY.2009 14:37:58

Test Data – Powerline Conducted Emissions

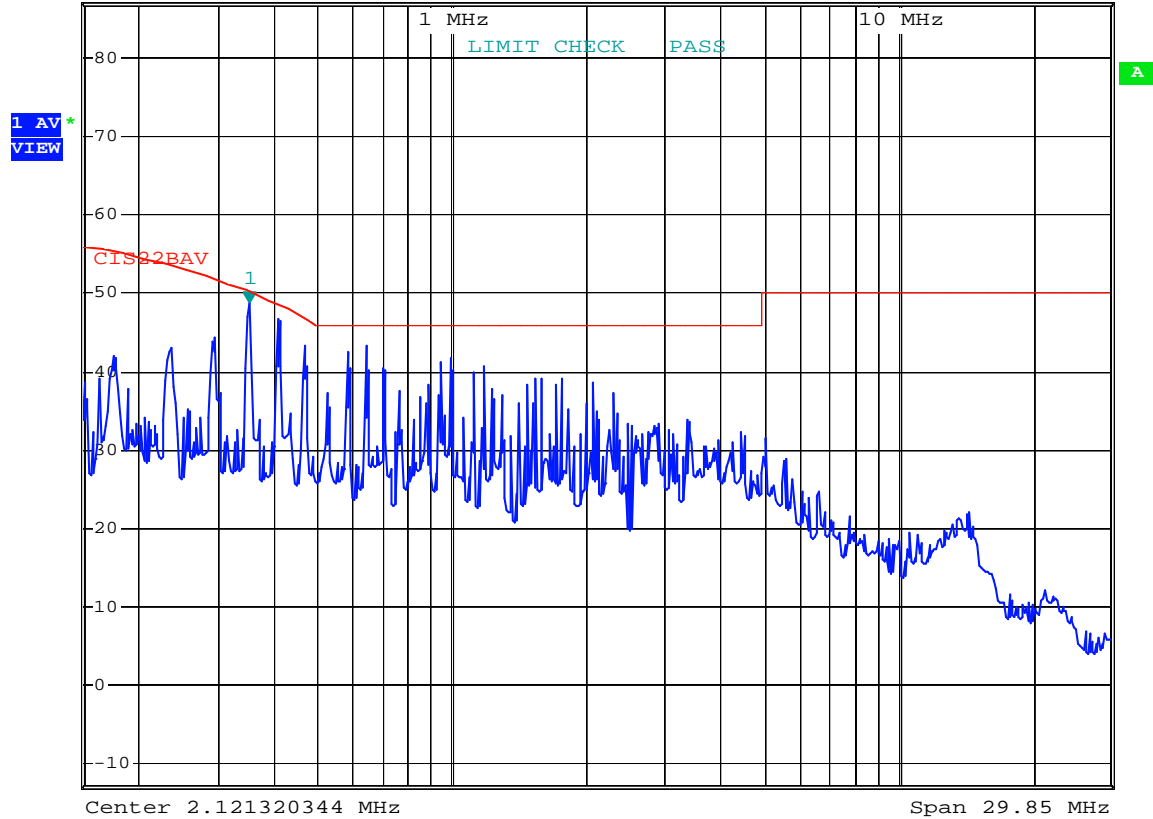
L1

Average



MARKER 1
353.881711 kHz
Ref 87 dBµV Att 10 dB

*RBW 10 kHz Marker 1 [T1]
VBW 100 kHz 48.71 dBµV
SWT 300 ms 353.881710965 kHz



Date: 14.MAY.2009 14:37:33

Test Data – Powerline Conducted Emissions

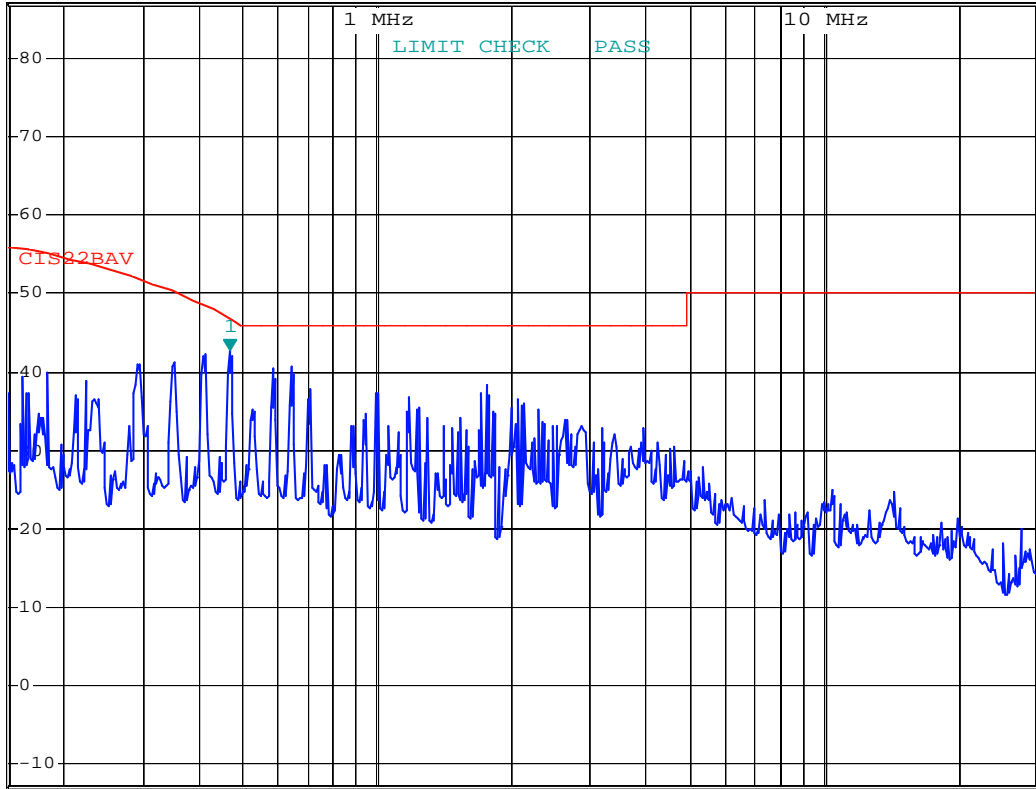
L2 Peak



MARKER 1
471.1006876 kHz
Ref 87 dBµV Att 10 dB

*RBW 10 kHz Marker 1 [T1]
VBW 30 kHz 42.76 dBµV
SWT 300 ms 471.100687601 kHz

1 PK
VIEW



Center 2.121320344 MHz

Span 29.85 MHz

Date: 14.MAY.2009 14:39:12

Test Data – Powerline Conducted Emissions

L2

Average

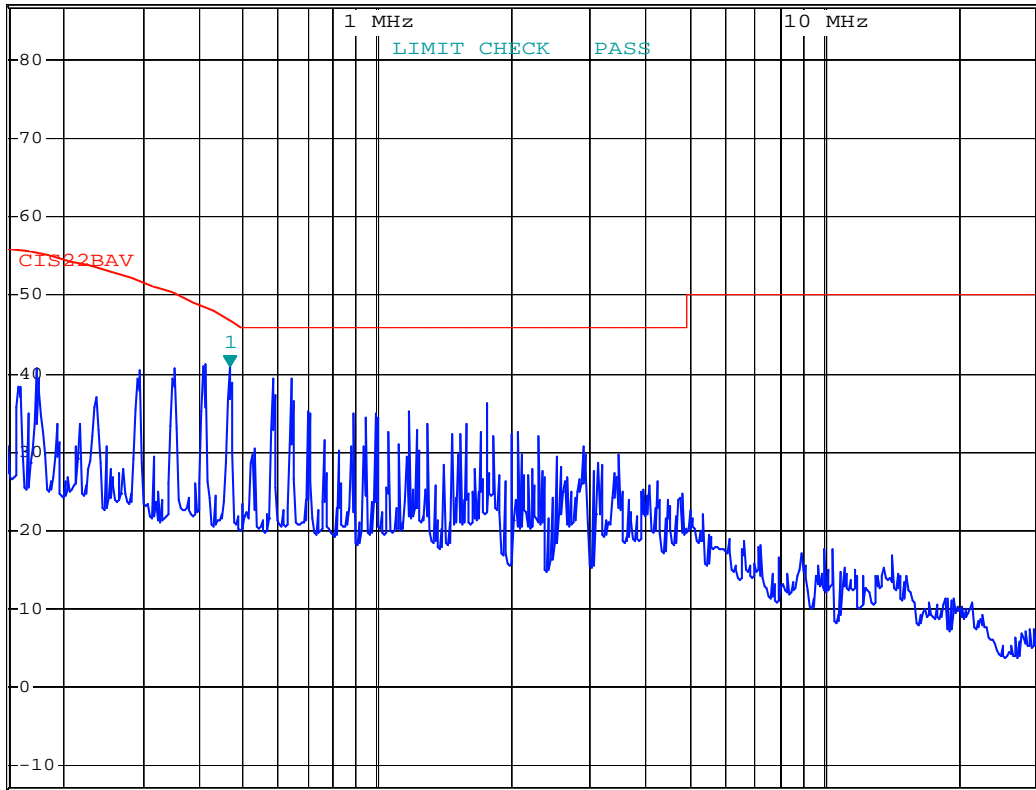


*RBW 10 kHz Marker 1 [T1]
VBW 100 kHz 40.90 dBµV
SWT 300 ms 471.100687601 kHz

Ref 87 dBµV

Att 10 dB

1 AV*
VIEW



Center 2.121320344 MHz

Span 29.85 MHz

Date: 14.MAY.2009 14:39:47

Section 10. Test Equipment List

Nemko ID	Description	Manufacturer Model Number	Serial Number	Calibration Date	Calibration Due
1763	Bilog Antenna	Schaffner CBL 6111D	22926	11/04/08	11/04/09
1767	MI Test Receiver 20Hz - 26.5 GHz - 150 - +30 dBm LC	ROHDE & SCHWARZ ESIB26	837491/0002	09/20/07	09/20/09
1783	Cable	Nemko? 0	0	06/12/08	06/12/09
1785	Preamplifier	A.H. SYSTEMS PAM-0126	143	04/06/09	04/06/10
993	Horn antenna	A.H. Systems SAS-200/571	XXX	08/31/07	08/31/09
1464	Spectrum analyzer	Hewlett Packard 8563E	3551A04428	02/27/09	02/28/11
1082	CABLE 2m	Astrolab 32027-2-29094-72TC	N/A	CBU	N/A
1472	20db Attenuator DC 18 Ghz	Omni Spectra 20600-20db	NONE	CBU	N/A
1659	Spectrum Analyzer	Rhode & Schwarz FSP	973353	05/28/08	05/29/10
1627	CABLE, 5 ft	MEGAPHASE 10312 1GVT4	N/A	CBU	N/A
545	LISN	Schwarz Beck 8120	8120350	08/05/08	08/05/09

ANNEX A - TEST DETAILS

NAME OF TEST: Powerline Conducted Emissions	PARA. NO.: 15.207(a)
---	----------------------

Minimum Standard: §15.207 Conducted limits.

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

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

* Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

(1) For carrier current systems containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 mV within the frequency band 535-1705 kHz, as measured using a 50 mH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits as provided in §15.205 and §§15.209, 15.221, 15.223, 15.225 or 15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provision for, the use of battery chargers which permit operating while charging, AC adaptors or battery eliminators or that connect to the AC power lines indirectly, obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

NAME OF TEST: Occupied Bandwidth	PARA. NO.: 15.247(a)(2)
----------------------------------	-------------------------

Minimum Standard: The minimum 6 dB bandwidth shall be at least 500 kHz

NAME OF TEST: Maximum Peak Output Power	PARA. NO.: 15.247(b)(3)
---	-------------------------

Minimum Standard: The maximum peak output power shall not exceed 1 watt.

If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point to point operation may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceed 6 dBi.

Systems operating in the 5725 – 5850 MHz band that are used exclusively for fixed, point-to-point operation may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter peak output power.

Direct Measurement Method For Detachable Antennas:

If the antenna is detachable, a peak power meter is used to measure the power output with the transmitter operating into a 50 ohm load. The dBi gain of the antenna(s) employed shall be reported.

Substitution Antenna Method for Integral Antennas:

The peak field strength of the carrier is measured in a worst-case configuration with a RBW > 5 times the occupied bandwidth of the transmitted waveform. For cases where the RBW of the test instrument is not sufficient, the power is measured using a peak power meter instead of the spectrum analyzer.

The RBW of the spectrum analyzer shall be set to a value greater than the measured 6 dB occupied bandwidth of the E.U.T.

Number of channels tested:

Tuning range	Number of channels tested	Channel location in band
1 MHz or less	1	middle
1 to 10 MHz	2	top and bottom
more than 10 MHz	3	top, middle, bottom

NAME OF TEST: Occupied Bandwidth	PARA. NO.: 15.247(a)(2)
----------------------------------	-------------------------

Minimum Standard:

Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Method Of Measurement:

The spectrum analyzer is set as follows:

RBW = VBW = 100 kHz.

Span: Sufficient to display 6 dB bandwidth

LOG dB/div.: 10 dB

Sweep: Auto

Number of channels tested:

Tuning range	Number of channels tested	Channel location in band
1 MHz or less	1	middle
1 to 10 MHz	2	top and bottom
more than 10 MHz	3	top, middle, bottom

NAME OF TEST: Spurious Emissions(conducted)	PARA. NO.: 15.247(d)
---	----------------------

Minimum Standard: In any 100kHz bandwidth outside the frequency band in which the transmitter is operating, emissions shall be at least 20 dB below the fundamental emission or shall not exceed the following field strength limits. Emissions falling in the restricted bands of 15.205 shall not exceed the following field strength limits:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$ @ 3m)	Field Strength (dB @ 3m)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

THE SPECTRUM IS SEARCHED TO THE 10th HARMONIC OF THE HIGHEST FREQUENCY GENERATED IN THE EUT.

Method Of Measurement:

30 MHz - 10th harmonic plot

RBW: 100 kHz

VBW: 300 kHz

Sweep: Auto

Display line: -20 dBc

Lower Band Edge

RBW: At least 1% of span/div.

VBW: >RBW

Span: As necessary to display any spurious at band edge.

Sweep: Auto

Center Frequency: 902 MHz, 2400 MHz, or 5725 MHz

Marker: Peak of fundamental emission

Marker Δ : Peak of highest spurious level below center frequency.

Upper Band Edge

RBW: At least 1% of span/div.

VBW: >RBW

Span: As necessary to display any spurious at band edge.

Sweep: Auto

Center Frequency: 928 MHz, 2483.5 MHz, or 5850 MHz

Marker: Peak of fundamental emission

Marker Δ : Peak of highest spurious level above center frequency.

Number of channels tested:

Tuning range	Number of channels tested	Channel location in band
1 MHz or less	1	middle
1 to 10 MHz	2	top and bottom
more than 10 MHz	3	top, middle, bottom

NAME OF TEST: Radiated Spurious Emissions	PARA. NO.: 15.247(c)
---	----------------------

Minimum Standard: In any 100kHz bandwidth outside the frequency band in which the transmitter is operating, emissions shall be at least 20 dB below the fundamental emission or shall not exceed the following field strength limits:

Emissions falling in the restricted bands of 15.205 shall not exceed the following field strength limits:

Frequency (MHz)	Field Strength ($\mu\text{V/m @ 3m}$)	Field Strength (dB @ 3m)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

THE SPECTRUM WAS SEARCHED TO THE 10th HARMONIC

15.205 Restricted Bands

MHz	MHz	MHz	GHz
0.09-0.11	16.42-16.423	399.9-410	4.5-5.25
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.125-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41	1718		

Number of channels tested:

Tuning range	Number of channels tested	Channel location in band
1 MHz or less	1	middle
1 to 10 MHz	2	top and bottom
more than 10 MHz	3	top, middle, bottom

NAME OF TEST: Transmitter Power Density	PARA. NO.: 15.247(d)
---	----------------------

Minimum Standard: The transmitted power density averaged over any 1 second interval shall not be greater than +8 dBm in any 3 kHz bandwidth.

Method Of Measurement: The spectrum analyzer is set as follows:

- RBW: 3 kHz
- VBW: >3 kHz
- Span: => measured 6 dB bandwidth
- Sweep: Span(kHz)/3 (i.e. for a span of 1.5 MHz the sweep rate is 1500/3 = 500 sec.
- LOG dB/div.: 2 dB

Note: For devices with spectrum line spacing \leq 3 kHz, the RBW of the analyzer is reduced until the spectral lines are resolved. The measurement data is normalized to 3 kHz by summing the power of all the individual spectral lines within a 3 kHz band in linear power units.

For Devices With Integral Antenna:

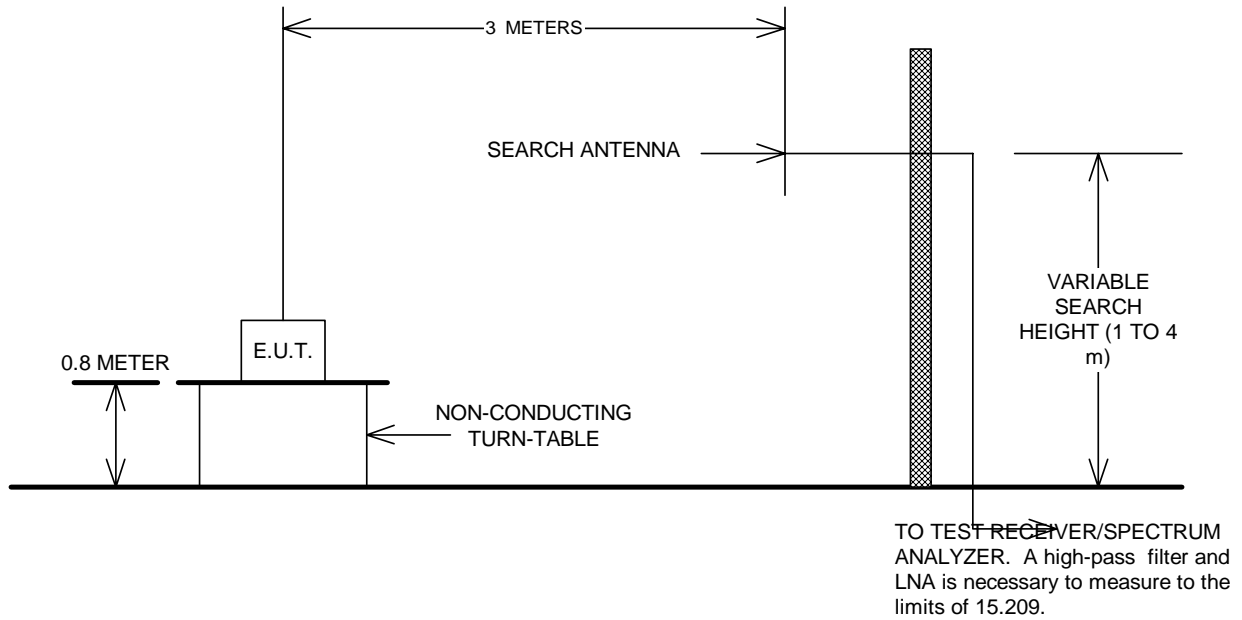
For devices with non-detachable antennas, the received field strength is peaked and the spectrum analyzer is set as above. The peak emission level is then measured and converted to a field strength by adding the appropriate antenna factor and cable loss. This field strength is then converted to an equivalent isotropic radiated power using the same method as described for Peak Power output.

Number of channels tested:

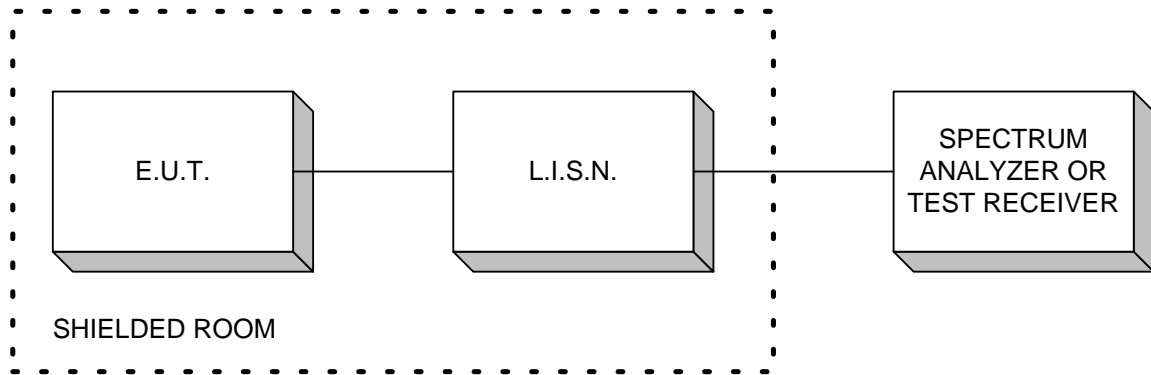
Tuning Range	Number Of Channels Tested	Channel Location In Band
1 MHz or Less	1	Middle
1 to 10 MHz	2	Top And Bottom
More Than 10 MHz	3	Top, Middle, Bottom

ANNEX B - TEST DIAGRAMS

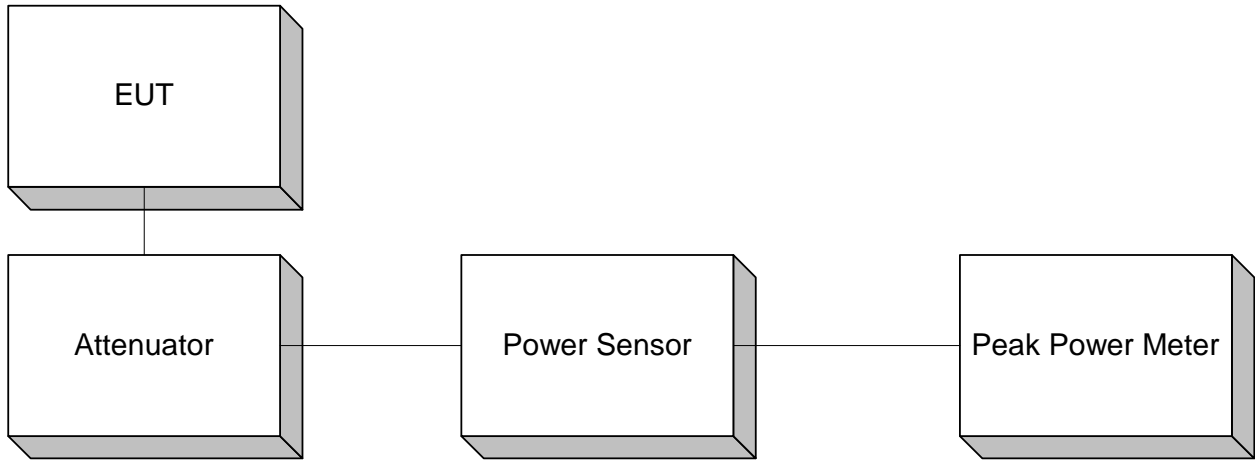
Test Site For Radiated Emissions



Conducted Emissions



Peak Power At Antenna Terminals



Note: A spectrum analyzer may be substituted for Peak Power Meter given that the measurement bandwidth is sufficient to capture the 60 dB bandwidth of the transmitter.

**Minimum 6 dB Bandwidth
Peak Power Spectral Density
Spurious Emissions (conducted)**

