



Nemko Test Report: 44286RUS1

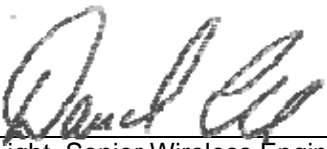
Applicant: Traxxas
1100 Klein Road
Plano, Texas 75074
USA

**Equipment Under Test:
(E.U.T.)** SA-09181

FCC Identifier: XVE-SA09181


In Accordance With: **FCC Part 15, Subpart C, 15.247 and
Industry Canada, 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
: 05 May 2010

APPROVED BY: 

Tom Tidwell, Telecom Direct

DATE
: 10 May 2010

Table of Contents

SECTION 1.	SUMMARY OF TEST RESULTS	3
SECTION 2.	EQUIPMENT UNDER TEST (E.U.T.)	5
SECTION 3.	RADIATED EMISSIONS	7
SECTION 4.	TEST EQUIPMENT LIST	10
ANNEX A -	TEST DETAILS	11
ANNEX B -	TEST DIAGRAMS	13

Section 1. Summary of Test Results

Manufacturer: Traxxas

Model No.: SA-09181

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 Industry Canada RSS-210, Issue 7 for Digital Transmission Systems. Radiated tests were conducted in accordance with ANSI C63.4-2003. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC and Industry Canada.

- | | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|---------------------|
| <input type="checkbox"/> | New Submission | <input checked="" type="checkbox"/> | Production Unit |
| <input checked="" type="checkbox"/> | Class II Change/Modification Filing | <input 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".



NVLAP Lab Code 100426-0

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

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Nemko USA, Inc. is a NVLAP accredited laboratory.

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	NA
Minimum 6 dB Bandwidth	15.247(a)(2) / RSS-210 A8.2(a)	Not tested
Maximum Peak Power Output	15.247(b)(3) / RSS-210 A8.4(4)	Not tested
Spurious Emissions (Antenna Conducted)	15.247(d) / RSS-210 A8.5	Not tested
Spurious Emissions (Radiated)	15.247(d)/15.209(a) / RSS-210 A8.5	Complies
Peak Power Spectral Density	15.247(e) / RSS-210 A8.2(b)	Not tested
Receiver Spurious Emissions	RSS-Gen 7.2.3	Not tested

Footnotes:

- 1) The device is powered by 4 AA batteries.
- 2) The RF switch has been changed in the device. No changes affecting the output power or frequency determining components have been changed. Please refer to Nemko USA (Dallas) test report 37863RUS1 for original results.

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"/>

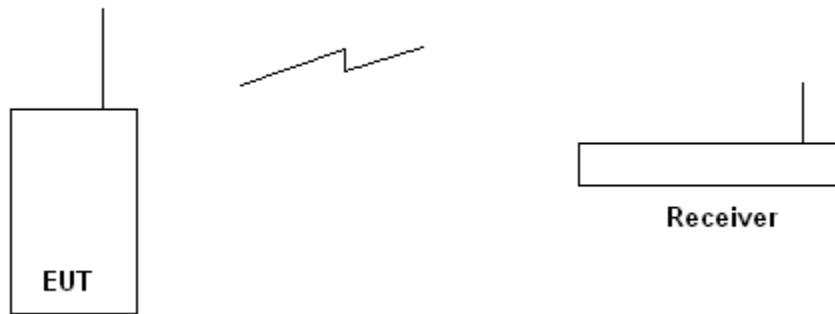
Operating Frequency of Test Sample: 2407 to 2454 MHz

User Frequency Adjustment: Software controlled

Description of EUT

The SA-09181 transceiver is used in Traxxas remote controls for radio controlled toys.

System Diagram



Section 3. Radiated Emissions

NAME OF TEST: Radiated Emissions	PARA. NO.: 15.247 (d)
TESTED BY: David Light	DATE: 04 May 2010

Test Results: Complies.

Measurement Data: See attached table.

Test Conditions: 35 %RH
22 °C

Measurement Uncertainty: +/-1.7 dB

Test Equipment Used: 1480-791-993-1016-1464-1484-1485

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.

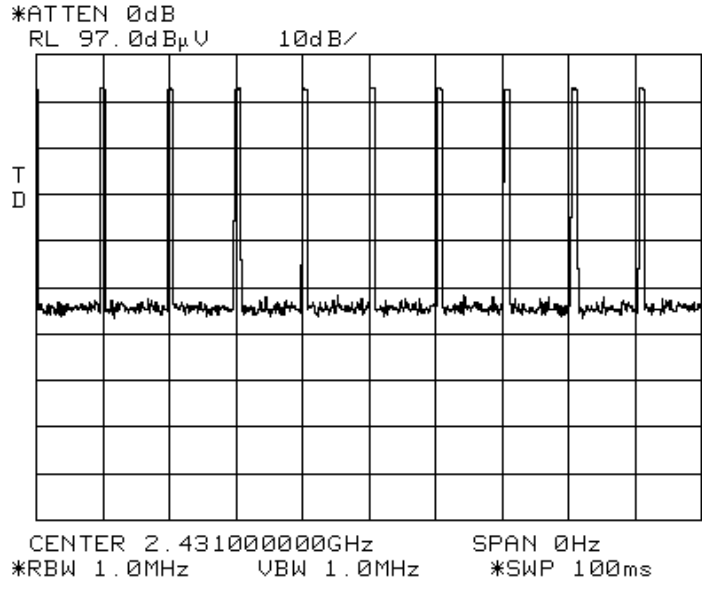
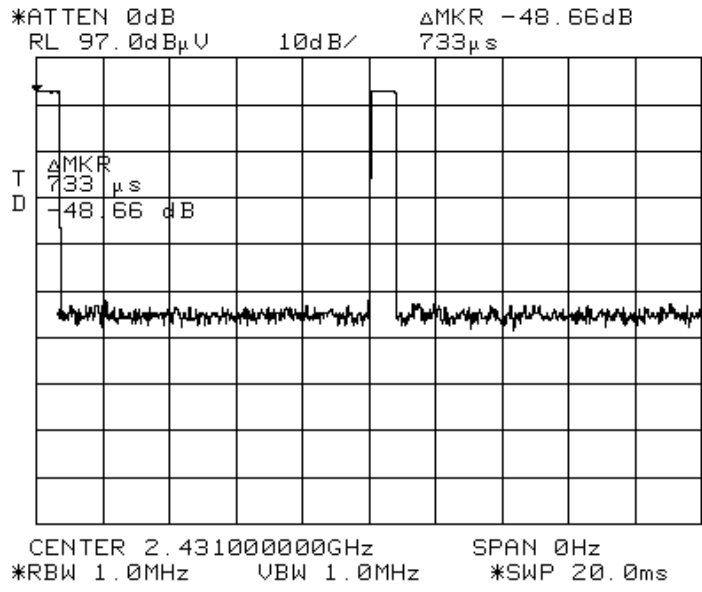
RBW=VBW=100 kHz below 1000 MHz
RBW=VBW=1 MHz above 1000 MHz

Radiated Emissions

#	Freq MHz	Rdng dBµV	Cable Duty dB	Cable dB	Pre-A dB	Horn dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	2483.5	33.7	+0.8	+2.3	+0.0	+29.0	+0.0	65.8	74.0	-8.2	Vert
	Peak		+0.0								
2	2483.5	33.7	+0.8	+2.3	+0.0	+29.0	+0.0	45.8	54.0	-8.2	Vert
	Average		-20.0								
3	2483.5	27.7	+0.8	+2.3	+0.0	+29.0	+0.0	59.8	74.0	-14.2	Horiz
	Peak		+0.0								
4	2483.5	27.7	+0.8	+2.3	+0.0	+29.0	+0.0	39.8	54.0	-14.2	Horiz
	Average		-20.0								

Corrected reading = Rdng + AF + Duty Cycle + Cable Loss + Pre-Amp Gain

Duty Cycle Calculation



Duty Cycle correction = $20 \log (\text{Ton}/100 \text{ mS})$
 $20 \log (7.33/100) = -22.7 \text{ dB}$

Section 4. Test Equipment List

Asset Tag	Description	Manufacturer	Model	Serial #	Last Cal	Next Cal
993	Antenna, Horn	A.H. Systems	SAS-200/571	162	09-Sep-2009	09-Sep-2011
1016	Preamplifier	Hewlett Packard	8449A	2749A00159	23-Jun-2009	23-Jun-2010
1464	Spectrum Analyzer	Hewlett Packard	8563E	3551A04428	27-Feb-2009	27-Feb-2011
1480	Antenna, Bilog	Schaffner- Chase	CBL6111C	2572	18-Jan-2010	18-Jan-2011
1484	Cable	Storm	PR90-010- 072		23-Jun-2009	23-Jun-2010
1485	Cable	Storm	PR90-010- 216		23-Jun-2009	23-Jun-2010
791	PreAmp	Nemko, USA			03-Aug-2009	03-Aug-2010

ANNEX A - TEST DETAILS

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

ANNEX B - TEST DIAGRAMS

Test Site for Radiated Emissions

