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FCC TEST REPORT

FCC 47 CFR Part 15C
Industry Canada RSS-210

Frequency hopping systems operating within the 2400 – 2483.5 MHz band

Report Reference No.....:	G0M-1405-3862-TFC247BT-V01
Testing Laboratory.....:	Eurofins Product Service GmbH
Address.....:	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation.....:	A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC OATS Filing assigned code: 3470A
Applicant's name.....:	Kondo Kagaku Co., Ltd.
Address.....:	4-17-7 Higashi Nippori, Arakawa-Ku Tokyo 116-0014 JAPAN
Test specification:	
Standard.....:	47 CFR Part 15C RSS-210, Issue 8, 2010-12 RSS-Gen, Issue 3, 2010-12 ANSI C63.4:2009
Equipment under test (EUT):	
Product description	Radio Control system for Model cars
Model No.	Esprit4
Additional Model(s)	None
Brand Name(s)	KOPROPO
Hardware version	None
Firmware / Software version	None
	FCC-ID: QH9KTSS-704 IC: N/A
Test result	**Passed**

Possible test case verdicts:	
- neither assessed nor tested ..... :	N/N
- required by standard but not appl. to test object..... :	N/A
- required by standard but not tested..... :	N/T
- not required by standard for the test object ..... :	N/R
- test object does meet the requirement..... :	P (Pass)
- test object does not meet the requirement..... :	F (Fail)

Testing:		
Test Lab Temperature..... :	20 – 23 °C	
Test Lab Humidity ..... :	32 – 38 %	
Date of receipt of test item ..... :	2014-06-16	
Date (s) of performance of tests ..... :	2014-06-17 – 2014-09-22	
Compiled by ..... :	Antje Bartusch	
Tested by (+ signature)..... : (Responsible for Test)	Wilfried Treffke	W. Treffke
Approved by (+ signature) ..... :	Christian Weber	C. Weber
Date of issue ..... :	2014-10-28	
Total number of pages ..... :	75	

General remarks:

The test results presented in this report relate only to the object tested.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

Additional comments:

Version History

Version	Issue Date	Remarks	Revised by
01	2014-10-28	Initial Release	

REPORT INDEX

1 Equipment (Test item) Description

Description	Radio Control system for Model cars	
Model	Esprit4	
Additional Model(s)	None	
Brand Name(s)	KOPROPO	
Serial number	None	
Hardware version	None	
Software / Firmware version	None	
FCC-ID	QH9KTSS-704	
IC	N/A	
Equipment type	End product	
Radio type	Transmitter only	
Radio technology	Frequency Hopping	
Operating frequency range	2402 - 2476 MHz	
Assigned frequency band	2400 - 2483.5 MHz	
Main test frequencies	F_{LOW}	2404 MHz
	F_{MID}	2440 MHz
	F_{HIGH}	2476 MHz
Spreading	FHSS	
Modulations	FSK	
Number of channels	29	
Channel spacing	1 MHz	
Number of antennas	1	
Antenna	Type	Simple wire antenna (1/2 wave antenna)
	Model	ANTB18-155A0
	Manufacturer	Sansei Electric Co.Ltd.
	Gain	1.9 dbi
Manufacturer	Kondo Kagaku Co., Ltd. 4-17-7 Higashi Nippori, Arakawa-Ku Tokyo 116-0014 JAPAN	
Power supply	V_{NOM}	6.0 VDC (NiCd Battery)
	V_{MIN}	--
	V_{MIN}	--

1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
AE	Receiver	Kondo	KR431FH	

***Note:** Use the following abbreviations:

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.5 Test Modes

Mode #	Description	
Hopping	General conditions:	EUT powered by battery
	Radio conditions:	Mode = hopping mode Spreading = FHSS Modulation = FSK Power setting = none
Single	General conditions:	EUT powered by battery
	Radio conditions:	Mode = hopping mode stopped Spreading = None Modulation = FSK Power setting = none

1.6 Test Equipment Used During Testing

Measurement Software			
Description	Manufacturer	Name	Version
EMC Test Software	Dare Instruments	Radimation	2014.1.15

20dB Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Number of hopping frequencies					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Time of occupancy					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Maximum peak conducted power					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Band edge compliance					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Conducted spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Radiated spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 1	EF00062	--	--
Spectrum Analyzer	R&S	FSIQ26	EF00242	2014-03	2015-03
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02
LPD Antenna	R&S	HL 223	EF00187	2014-03	2017-03
LPD Antenna	R&S	HL 025	EF00327	2013-02	2016-02

1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBµV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

Reading on Analyzer (dBµV) + A.F. (dB) = Net field strength (dBµV/m)

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dBµV/m). The FCC limits are given in units of µV/m. The following formula is used to convert the units of µV/m to dBµV/m:

Limit (dBµV/m) = 20*log (µV/m)

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading	+	AF	=	Net Reading	:	Net reading - FCC limit	= Margin
21.5 dBµV	+	26 dB	=	47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m	= -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, IC RSS-210				
Product Specific Standard Section	**Requirement – Test**	**Reference Method**	**Result**	**Remarks**
RSS-Gen 4.6.1	Occupied Bandwidth	RSS-Gen 4.6.1	N/R	Informational only
FCC § 15.247(a)(1) IC RSS-210 § A8.1	20 dB Bandwidth	Public notice DA 00-705	PASS	
FCC § 15.247(a)(1)(iii) IC RSS-210 § A8.1	Number of hopping frequencies	Public notice DA 00-705	PASS	
FCC § 15.247(a)(1) IC RSS-210 § A8.1	Frequency hopping channel separation	Public notice DA 00-705	PASS	
FCC § 15.247(a)(1)(iii) IC RSS-210 § A8.1	Time of occupancy (Dwell time)	Public notice DA 00-705	PASS	
FCC § 15.247(b)(1) IC RSS-210 § A8.4	Maximum peak conducted power	Public notice DA 00-705	PASS	
47 CFR 15.207 RSS-Gen 7.2.4	AC power line conducted emissions	ANSI C63.4	N/R	
FCC § 15.247(d) IC RSS-210 § A8.5	Band edge compliance	Public notice DA 00-705	PASS	
FCC § 15.247(d) IC RSS-210 § A8.5	Conducted spurious emissions	Public notice DA 00-705	PASS	
FCC § 15.247(d) FCC § 15.209 IC RSS-210 A8.5 IC RSS-Gen 4.9 IC RSS-Gen 7.2.5	Transmitter radiated spurious emissions	Public notice DA 00-705 / ANSI C 63.4	PASS	
IC RSS-Gen 4.10 IC RSS-Gen 6.1	Receiver radiated spurious emissions	ANSI C 63.4	N/R	
Remarks:				

3 Test Conditions and Results

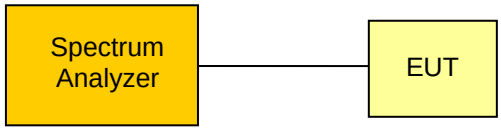
3.1 Test Conditions and Results – Occupied Bandwidth

Occupied Bandwidth acc. IC RSS-Gen	**Verdict: PASS**
Test according to measurement reference	Reference Method
	RSS-Gen 4.6.1
Test frequency range	Tested frequencies
	F_{LOW} / F_{MID} / F_{HIGH}

Limits

None (Informational only)

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Span set to at least twice the emission spectrum
3. Resolution bandwidth set to 1 % of span
4. Occupied Bandwidth (99 %) measurement with spectrum analyzer built in measurement function

Test results

Channel	Frequency [MHz]	Mode	Occupied Bandwidth [kHz]
F_{LOW}	2404	Single	1119.7
F_{MID}	2440	Single	1114.7
F_{HIGH}	2476	Single	1119.7

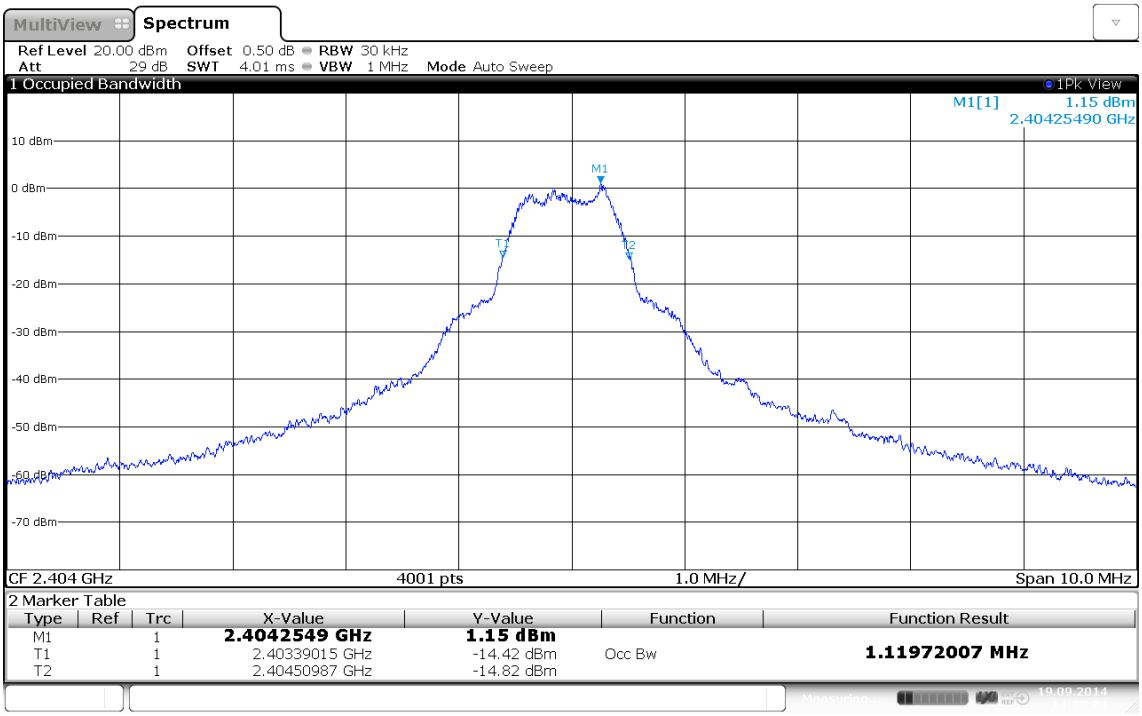
Comments:

Occupied Bandwidth – F_{LOW}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2404 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



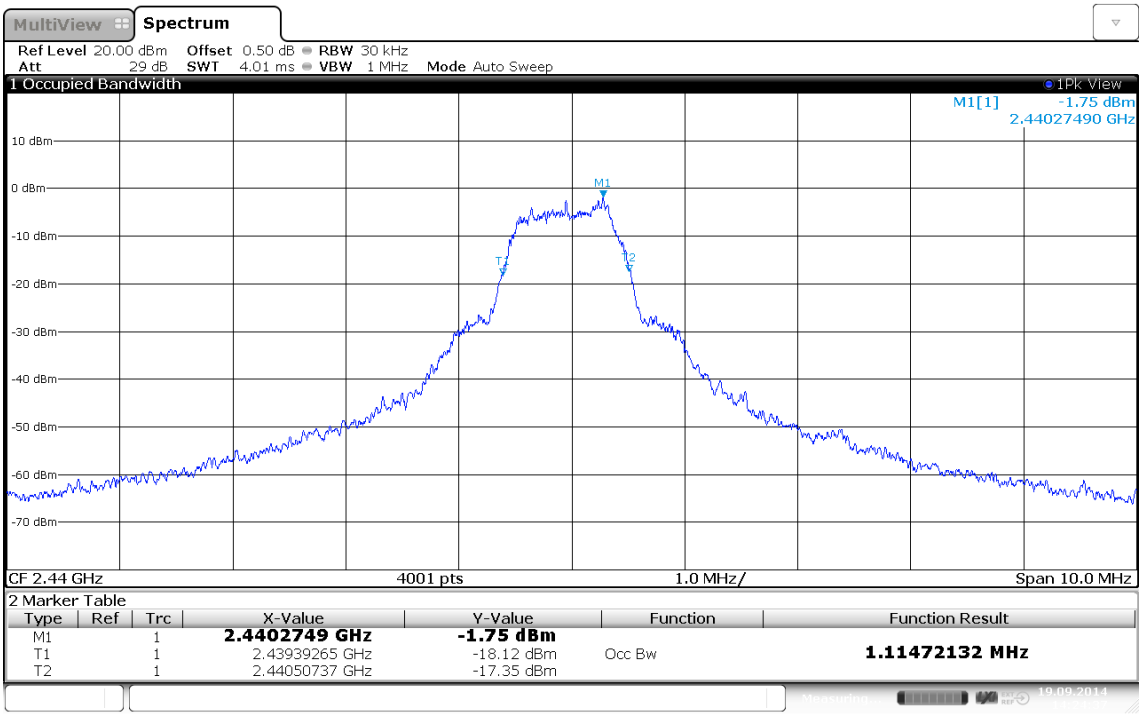
Occupied bandwidth: 1119.7 KHz
Date: 19.SEP.2014 14:38:03

Occupied Bandwidth – F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2440 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



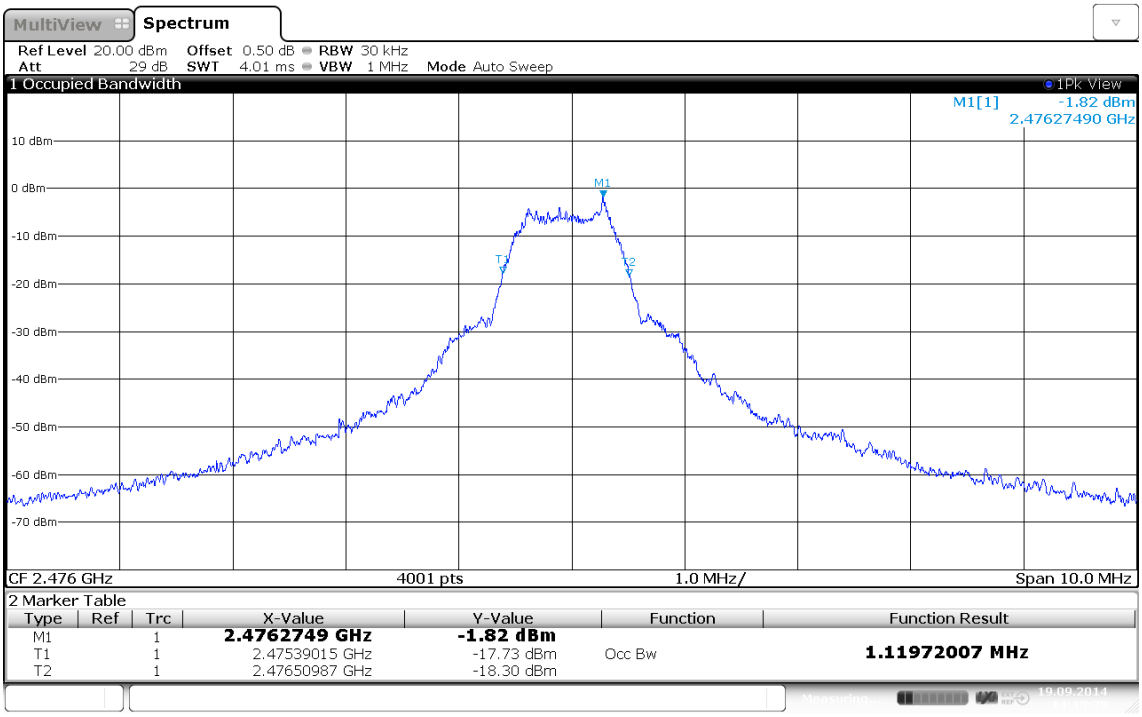
Occupied bandwidth: 1114.7 KHz
Date: 19.SEP.2014 14:24:36

Occupied Bandwidth – F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

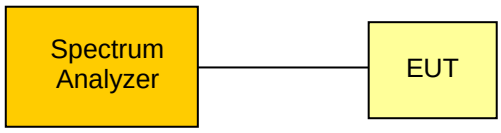
Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2476 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	A spectrum analyzer with an integrated 99% power bandwidth function is used
Note 2:	conducted measurement



Occupied bandwidth: 1119.7 KHz
Date: 19.SEP.2014 14:40:39

3.2 Test Conditions and Results – 20 dB Bandwidth

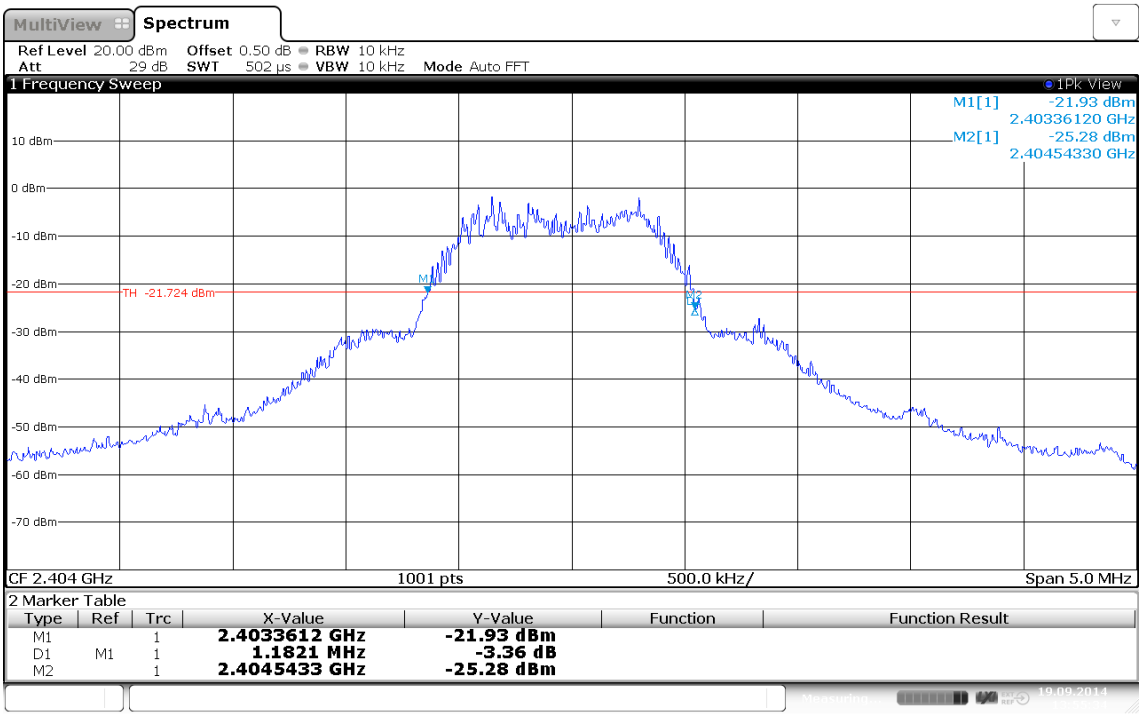
20 dB Bandwidth acc. FCC 15.247 / IC RSS-210					**Verdict: PASS**
EUT requirement rule parts and clause	Reference				
	FCC 15.247(a)(1) / IC RSS-210 A8.1				
Test according to measurement reference	Reference Method				
	FCC Public Notice DA 00-705				
Test frequency range	Tested frequencies				
	F_{LOW} / F_{MID} / F_{HIGH}				
Limits					
Limit	Condition				
1.5 · Carrier spacing	Output power ≤ 125 mW / 21 dBm				
1.0 · Carrier spacing	125 mW / 21 dBm < Output power ≤ 1 W / 30 dBm				
Test setup					
					
Test procedure					
1. EUT set to test mode (Communication tester is used if needed) 2. Span set to at least twice the emission spectrum 3. Detector set to peak and max hold 4. Envelope peak value of emission spectrum is selected 5. Marker on envelope of spectrum is set to level of -20 dB to the left of the peak 6. Marker on envelope of spectrum is set to level of -20 dB to the right of the peak 7. 20dB Bandwidth is determined by marker frequency separation					
Test results					
Channel	Frequency [MHz]	Mode	20 dB Bandwidth [MHz]	Limit [MHz]	Result
F_{LOW}	2404	Single	1.1821	3.0	PASS
F_{MID}	2440	Single	1.1965	3.0	PASS
F_{HIGH}	2476	Single	1.1965	3.0	PASS
Comments:					

20 dB Bandwidth – F_{LOW}

20 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2404 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	FCC part 15 section 247 (a)
Note 2:	



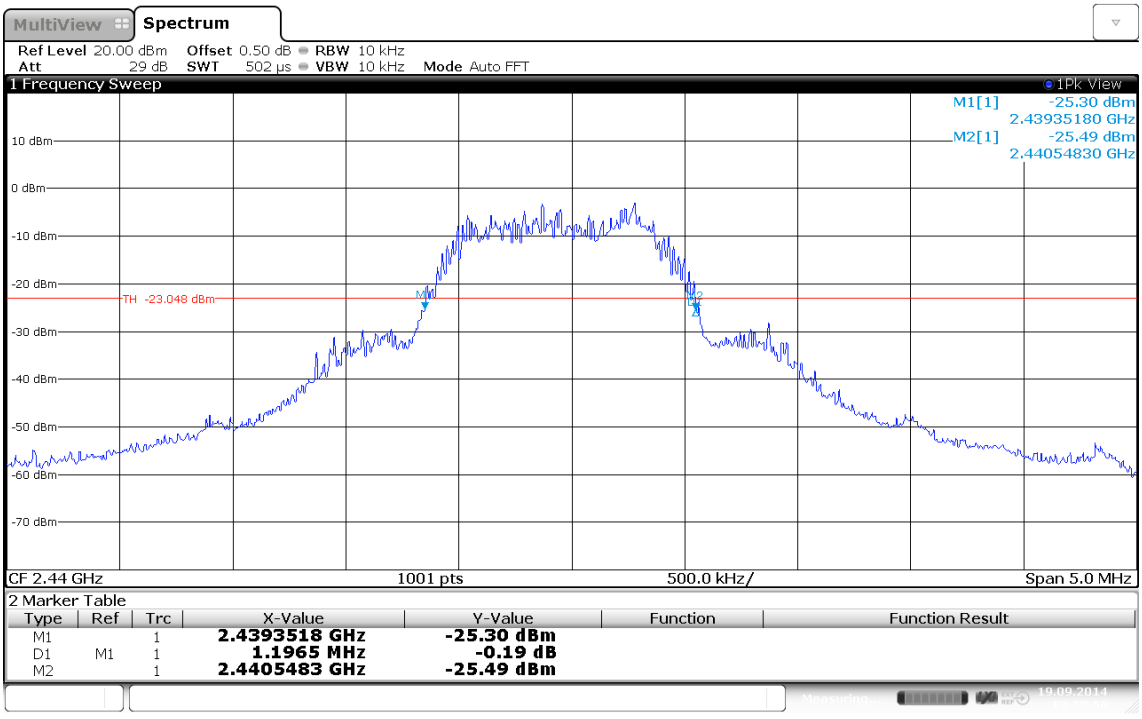
20 dB bandwidth: 1182.1 KHz
Date: 19.SEP.2014 13:55:34

20 dB Bandwidth – F_{MID}

20 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2440 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	FCC part 15 section 247 (a)
Note 2:	



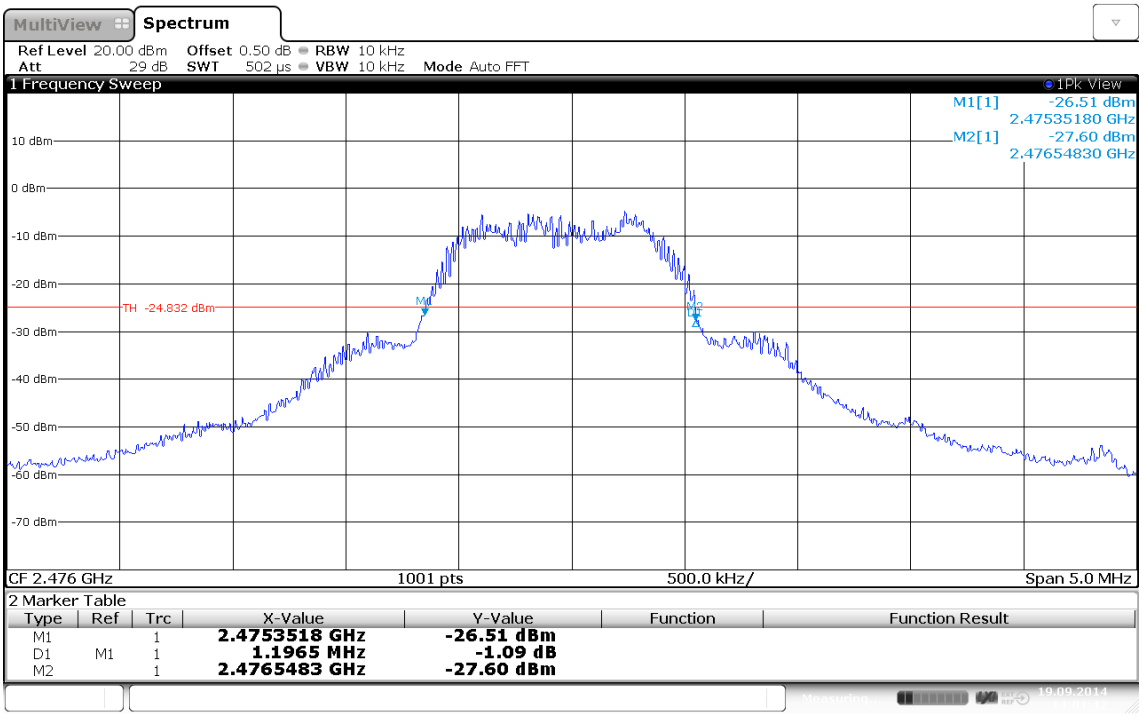
20 dB bandwidth: 1196.5 KHz
Date: 19.SEP.2014 13:58:56

20 dB Bandwidth – F_{HIGH}

20 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2476 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	FCC part 15 section 247 (a)
Note 2:	



20 dB bandwidth: 1196.5 KHz
Date: 19.SEP.2014 14:01:42

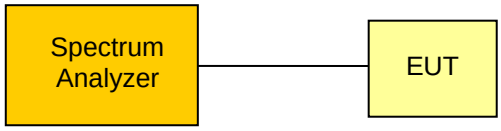
3.3 Test Conditions and Results – Number of hopping frequencies

Number of hopping frequencies acc. FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(a)(1)(iii) / IC RSS-210 A8.1
Test according to measurement reference	Reference Method
	FCC Public Notice DA 00-705
Test frequency range	Tested frequencies
	F_{LOW} - F_{HIGH}
EUT test mode	Hopping

Limits

Limit	Condition
Number of hopping channels ≥ 15	Output power ≤ 125 mW / 21 dBm
Number of hopping channels ≥ 75	125 mW / 21 dBm < Output power ≤ 1 W / 30 dBm

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Span set to measurement frequency range
3. Detector set to peak and max hold
4. Resolution bandwidth is set small enough to resolve hopping channel emission spectra
5. The number of peaks is counted to determine number of hopping frequencies

Test results

Number of hopping frequencies	Limit	Result
29	≥ 15	PASS

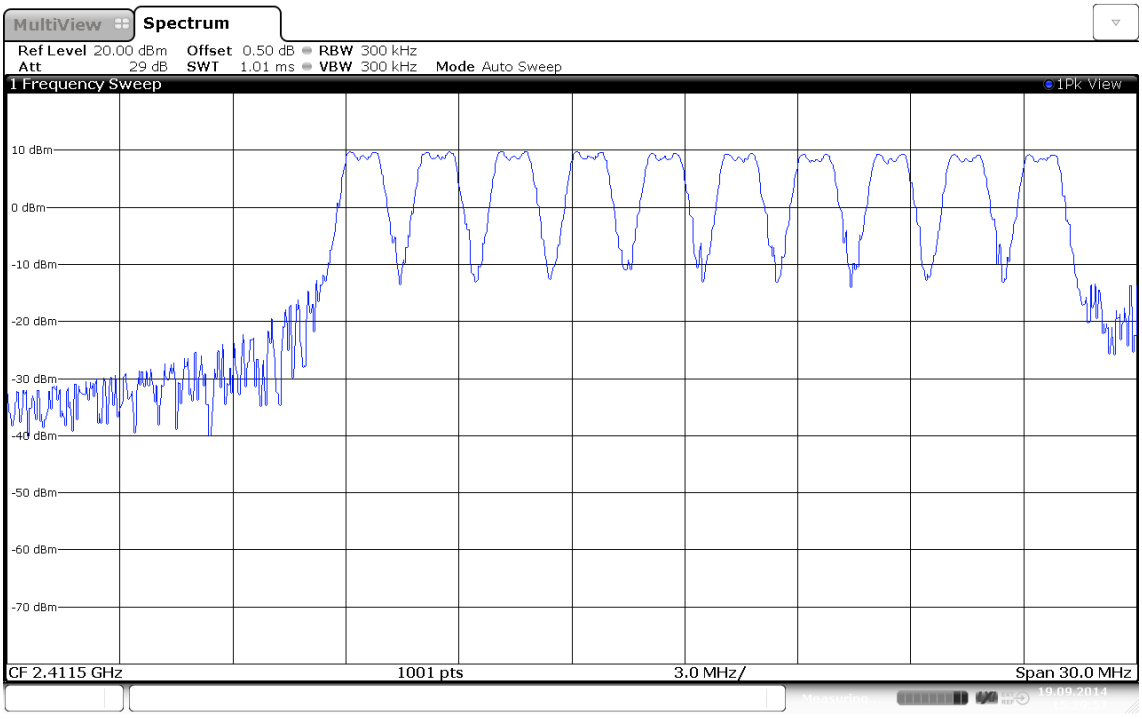
Comments:

Number of hopping frequencies - Range A

Number of Hopping Frequencies acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, GFSK, hopping mode
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Number of Hopping Frequencies (DA 00-705 Meas Guidance)
Note 2:	conducted measurement; channel 1 -10



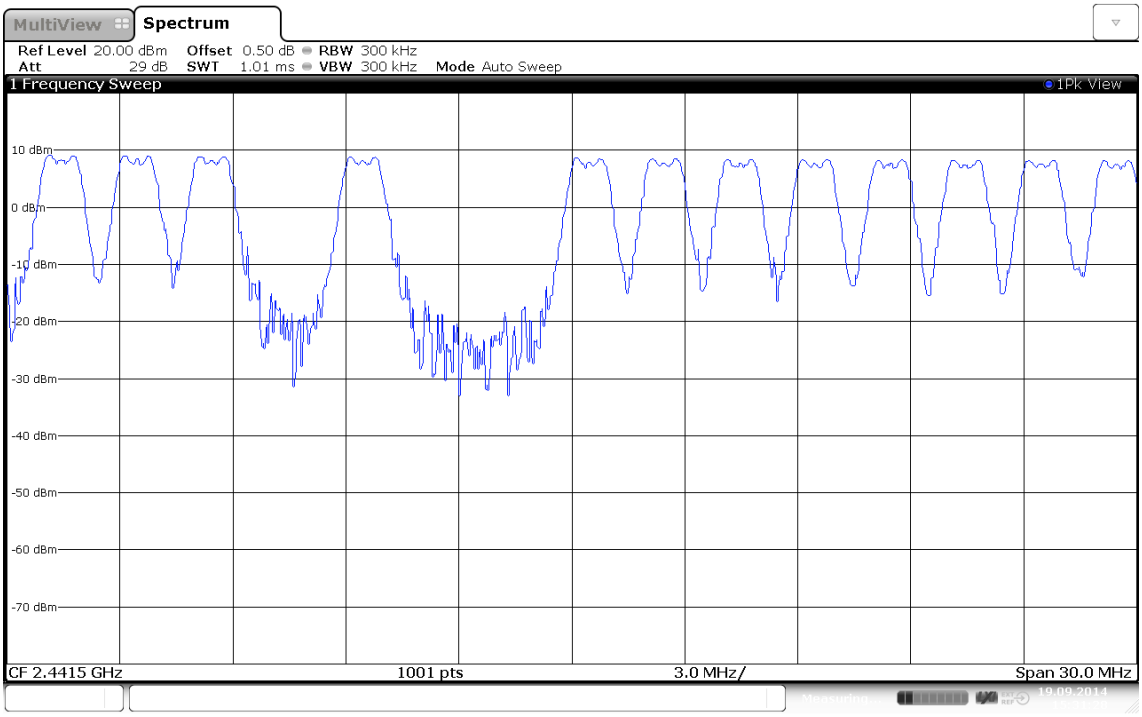
Number of hopping frequencies
Date: 19.SEP.2014 15:29:57

Number of hopping frequencies - Range B

Number of Hopping Frequencies acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, hopping mode
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Number of Hopping Frequencies (DA 00-705 Meas Guidance)
Note 2:	conducted measurement; channel 11 - 22



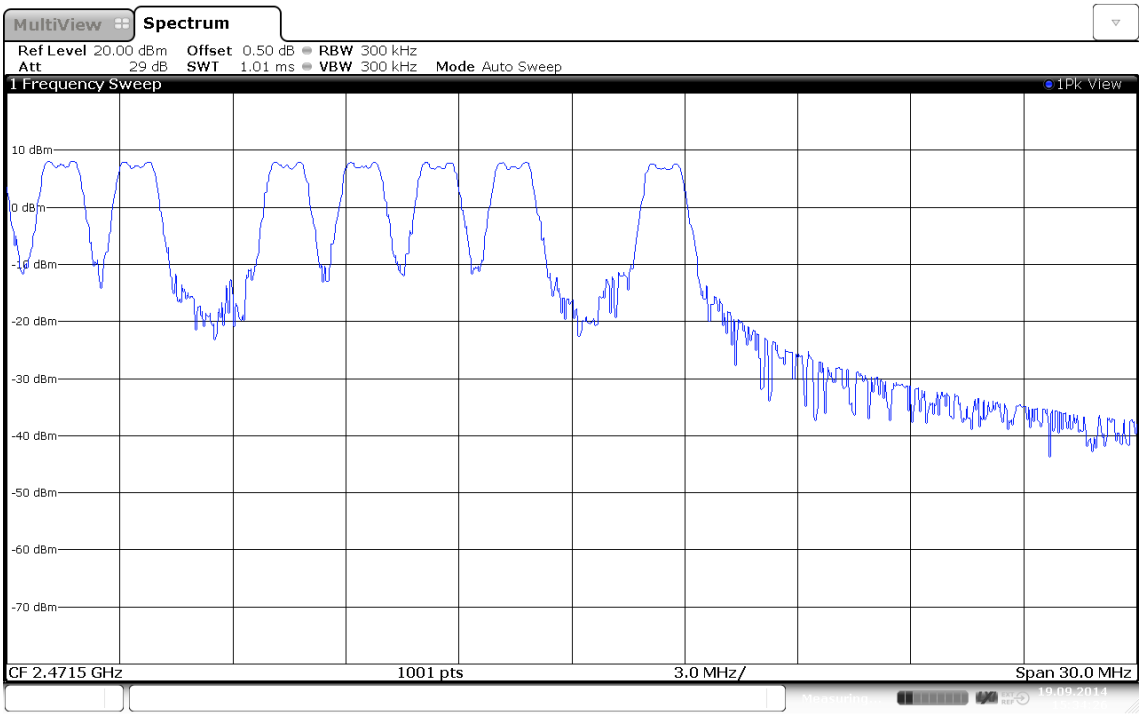
Number of hopping frequencies
Date: 19.SEP.2014 15:31:28

Number of hopping frequencies - Range C

Number of Hopping Frequencies acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, GFSK, hopping mode
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Number of Hopping Frequencies (DA 00-705 Meas Guidance)
Note 2:	conducted measurement; channel 22 -29



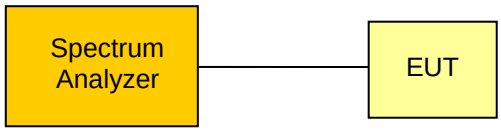
Number of hopping frequencies
Date: 19.SEP.2014 15:34:26

3.4 Test Conditions and Results – Frequency hopping channel separation

Frequency hopping channel separation acc. FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(a)(1) / IC RSS-210 A8.1
Test according to measurement reference	Reference Method
	FCC Public Notice DA 00-705
Test frequency range	Tested frequencies
	2441 & 2442 MHz
EUT test mode	Hopping

Limits	
Limit	Condition
≥ 25 kHz or ⅔ of 20 dB bandwidth	Output power ≤ 125 mW / 21 dBm
≥ 25 kHz or 20 dB bandwidth	125 mW / 21 dBm < Output power ≤ 1 W / 30 dBm

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Span set to measurement frequency range
3. Detector set to peak and max hold
4. Resolution bandwidth is set small enough to resolve hopping channel emission spectra
5. The two adjacent channel peaks are marked
6. Channel separation is determined from frequency separation of markers

Test results

Channel separation [kHz]	Limit [kHz]	Result
2010.0	≥ ⅔ · 1196.5 = 797.66	PASS

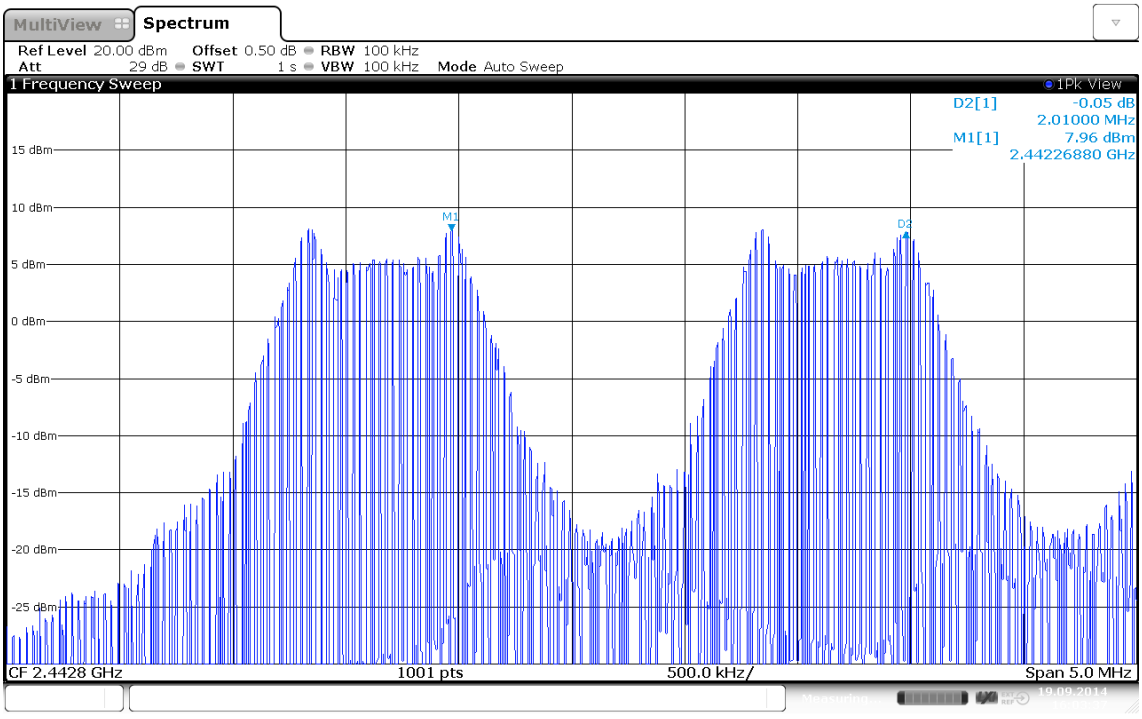
Comments:

Frequency hopping channel separation

Carrier Frequency Separation acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, GFSK, hopping mode
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Carrier Frequency Separation (DA 00-705 Meas Guidance)
Note 2:	conducted measurement



Limit: > two-thirds of the 20 dB bandwidth ; Result: Pass
Date: 19.SEP.2014 16:03:37

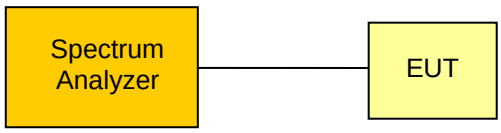
3.5 Test Conditions and Results – Time of occupancy (Dwell Time)

Time of occupancy (Dwell time) acc. FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(a)(1)(iii) / IC RSS-210 A8.1
Test according to measurement reference	Reference Method
	FCC Public Notice DA 00-705
Test frequency range	Tested frequencies
	2442 MHz
EUT test mode	Hopping

Limits

Limit
Time of occupancy ≤ 0.4 s within 0.4 s · Number of hopping channels

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Center frequency set to test channel center frequency
3. Span set to zero span and detector to peak and max hold
4. Resolution bandwidth is set to 100kHz and sweep time to observation period
5. Time of occupancy determined from number of peaks multiplied by single hop dwell time

Test results

Observation period [s]	No. of hops	Dwell time/hop [s]	Time of occupancy [s]	Limit [s]	Result
11.6	29	0.00052	0.0999	≤ 0.4	PASS

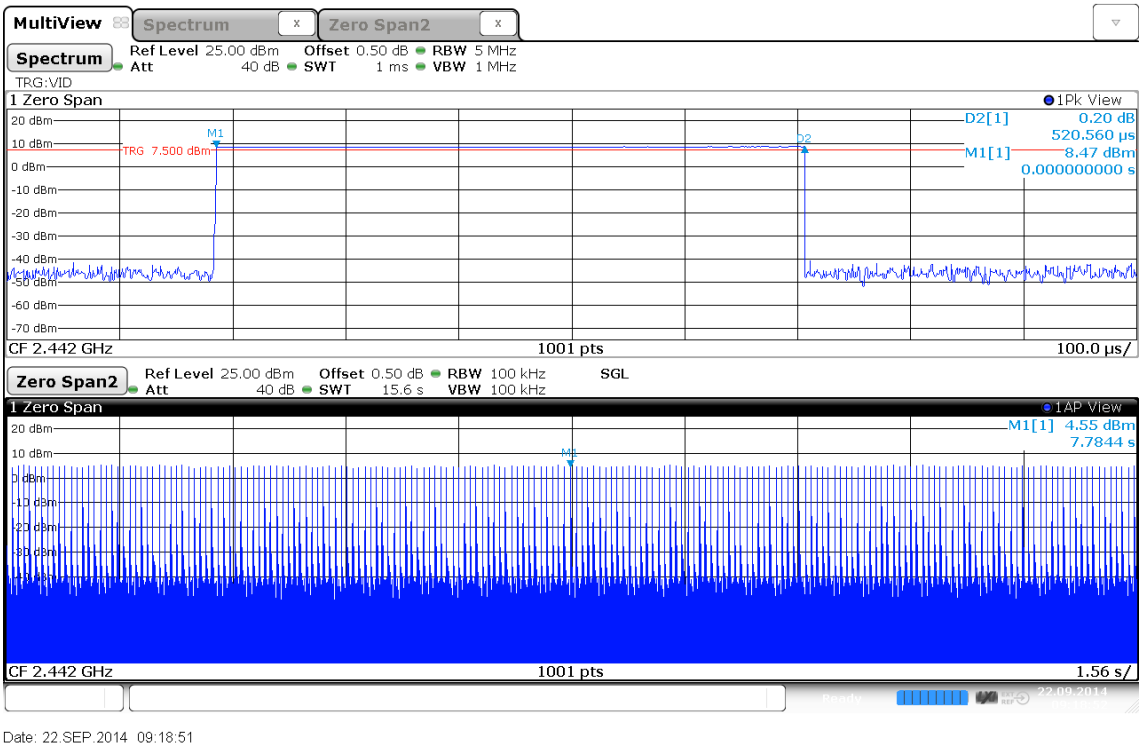
Comments:

Time of occupancy

Time of Occupancy acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, channel 2442MHz, hopping mode
Test Date:	2014-09-22
Verdict:	PASS
Note 1:	192 events * 0.5205ms; Result:99.9ms Limit<0.4s
Note 2:	conducted measurement, (DA 00-705 Meas Guidance)



3.6 Test Conditions and Results – Maximum peak conducted power

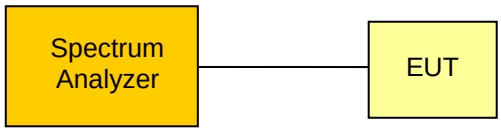
Maximum peak conducted power acc. FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(b)(1) / IC RSS-210 A8.4
Test according to measurement reference	Reference Method
	FCC Public Notice DA 00-705
Test frequency range	Tested frequencies
	F_{LOW} / F_{MID} / F_{HIGH}
Measurement mode	Peak
Maximum antenna gain	1.9 dBi ⇒ Limit correction = 0 dB

Limits

Limit	Condition
1 W (30 dBm)	Number of hopping channels ≥ 75
0.125 W (21 dBm)	75 > Number of hopping channels ≥ 15

The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Center frequency set to test channel center frequency
3. Span set to twice the 20 dB bandwidth and detector to peak and max hold
4. Resolution bandwidth is set to 3 MHz
5. Peak conducted power is determined from peak of spectrum envelope

Test results

Channel	Frequency [MHz]	Voltage	Mode	Peak power [dbm]	Peak power [W]	Limit [dBm]	Margin [dB]	Result
F_{LOW}	2404	6.0 VDC	Single	3.42	0.002	30	-26.58	PASS
F_{MID}	2440	6.0 VDC	Single	1.76	0.001	30	-28.24	PASS
F_{HIGH}	2476	6.0 VDC	Single	0.63	0.001	30	-29.37	PASS

Comments:

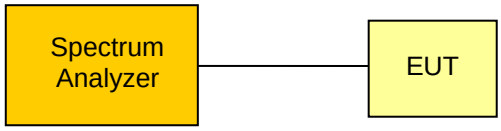
3.7 Test Conditions and Results – Band edge compliance

Band-edge compliance acc. FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(d) / IC RSS-210 A8.5
Test according to measurement reference	Reference Method
	FCC Public Notice DA 00-705
Test frequency range	Tested frequencies
	F_{LOW} / F_{HIGH}
Measurement mode	Peak

Limits

Limit	Condition
≤ -20 dB/100 kHz	Peak power measurement detector = Peak
≤ -30 dB/100 kHz	Peak power measurement detector = RMS

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Span set around lower band edge and detector is set to peak and max hold
3. Resolution bandwidth is set to 100 kHz
4. Markers are set to peak emission levels within frequency band and outside frequency band
5. Band edge attenuation is determined from level difference

Test results

Channel	Frequency [MHz]	Mode	Level [dBc]	Limit [dBc]	Margin [dB]	Result
F_{LOW}	2404	Single	-54.91	-20	-34.91	PASS
F_{HIGH}	2476	Single	-61.53	-20	-41.53	PASS
F_{LOW}	2404	Hopping	-46.87	-20	-26.87	PASS
F_{HIGH}	2476	Hopping	-51.61	-20	-31.61	PASS

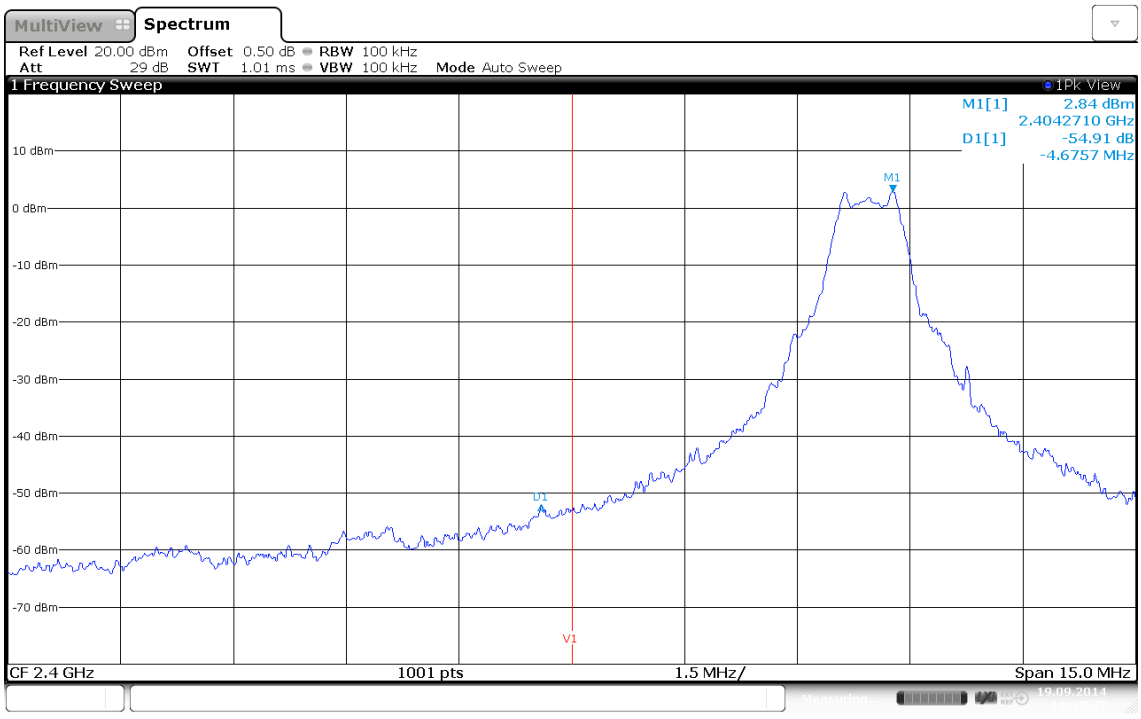
Comments:

Band-edge compliance – Single F_{LOW}

Band-edge compliance of RF conducted emission acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2404 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	FCC part 15 section 247 (c)
Note 2:	Single frequency mode



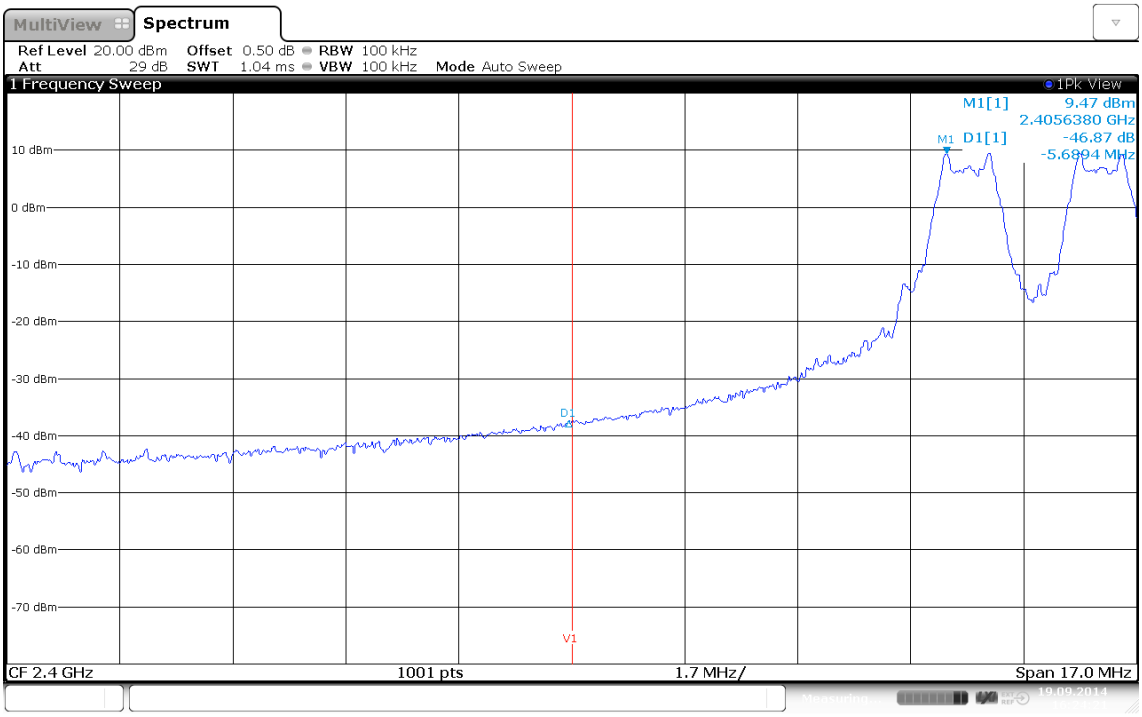
Limit: Marker Delta value >20 dB; Result: PASS
Date: 19.SEP.2014 14:13:26

Band-edge compliance – Hopping F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx,FSK, 2404 MHz, hopping mode
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Marker-delta method (DA 00-705 Meas Guidance)
Note 2:	lower Band-edge, conducted measurement



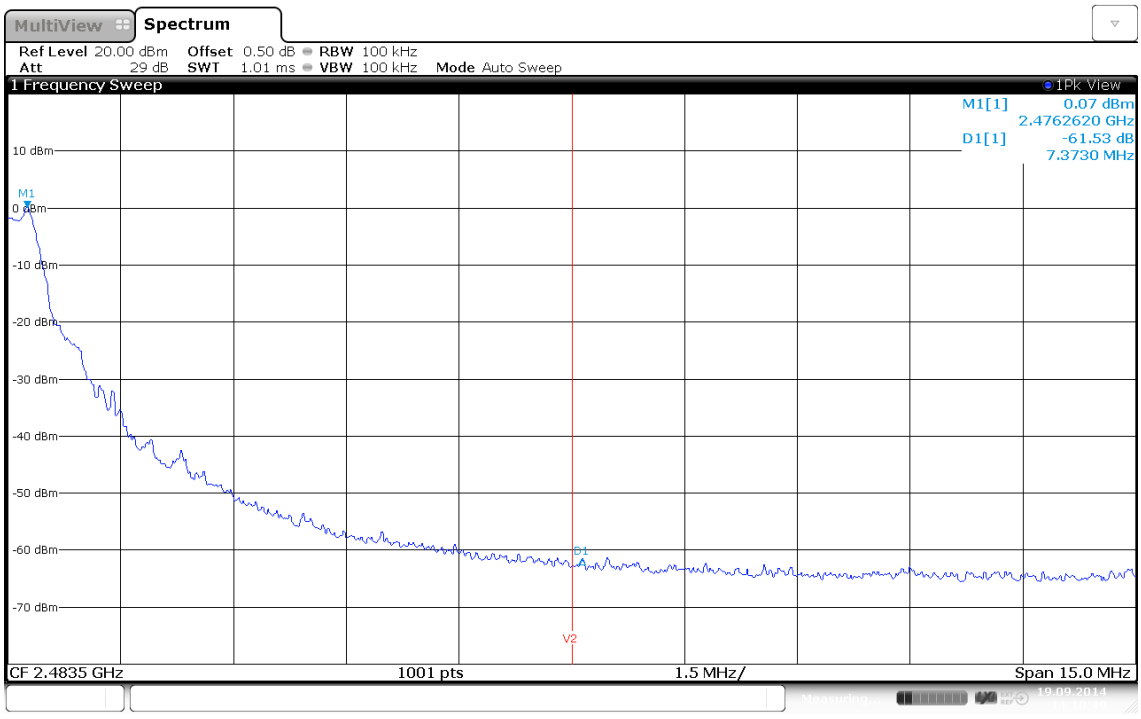
Limit: Marker Delta value >20 dB; Result: PASS
Date: 19.SEP.2014 16:24:21

Band-edge compliance – Single F_{HIGH}

Band-edge compliance of RF conducted emission acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2476 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	FCC part 15 section 247 (c)
Note 2:	Single frequency mode



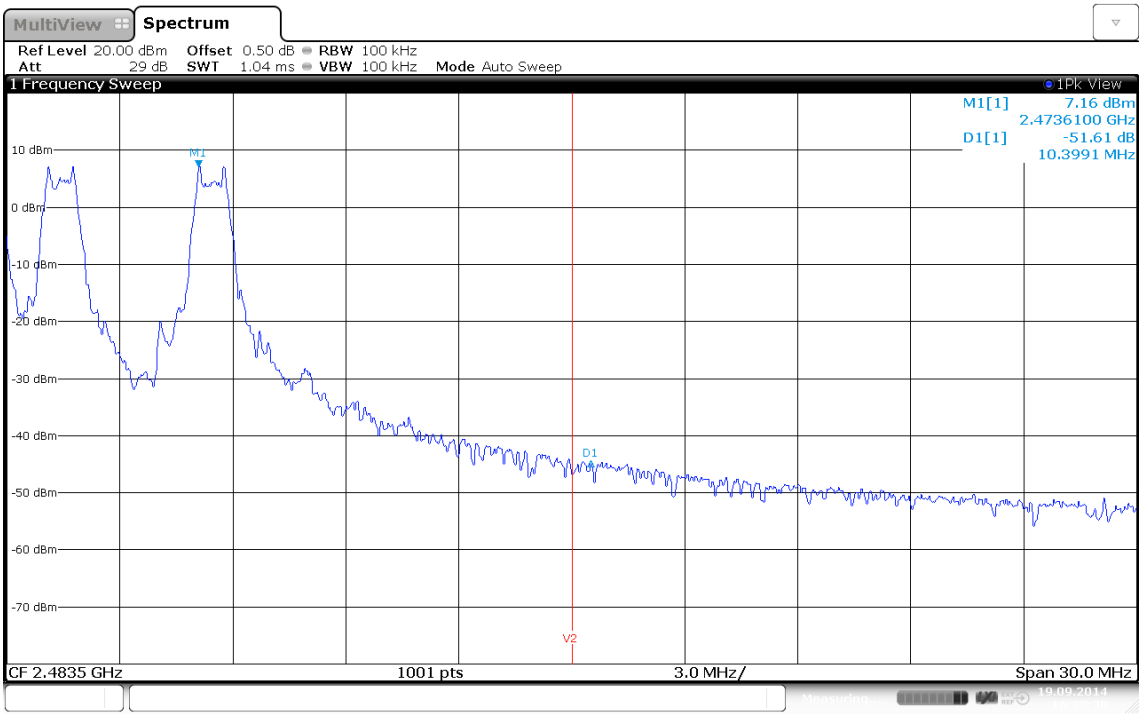
Limit: Marker Delta value >20 dB; Result: PASS
Date: 19.SEP.2014 14:10:49

Band-edge compliance – Hopping F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx,FSK, 2476 MHz, hopping mode
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Marker-delta method (DA 00-705 Meas Guidance)
Note 2:	upper Band-edge, conducted measurement



Limit: Marker Delta value >20 dB; Result: PASS
Date: 19.SEP.2014 16:28:30

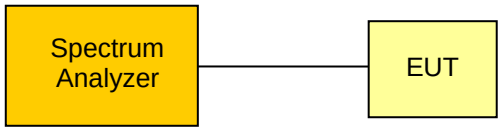
3.8 Test Conditions and Results – Conducted spurious emissions

Conducted spurious emissions acc. FCC 15.247 / IC RSS-210	**Verdict: PASS**
EUT requirement rule parts and clause	Reference
	FCC 15.247(d) / IC RSS-210 A8.5
Test according to measurement reference	Reference Method
	FCC Public Notice DA 00-705
Test frequency range	Tested frequencies
	10 MHz – 10th Harmonic
Measurement mode	Peak

Limits

Limit	Condition
≤ -20 dB/100 kHz	Peak power measurement detector = Peak
≤ -30 dB/100 kHz	Peak power measurement detector = RMS

Test setup



Test procedure

1. EUT set to test mode (Communication tester is used if needed)
2. Span it set according to measurement range
3. Resolution bandwidth is set to 100 kHz and detector to peak and max hold
4. Markers are set to peak emission levels within frequency band
5. Emission level is determined by second marker on emission peak
6. Attenuation is determined from level difference

Test results

Channel	Frequency [MHz]	Mode	Emission [MHz]	Emission Level [dbm]	Peak power [dBm]	Limit [dBm]	Margin [dB]	Result
F_{LOW}	2404	Single	no significant spurious emissions					PASS
F_{MID}	2440	Single	no significant spurious emissions					PASS
F_{HIGH}	2476	Single	no significant spurious emissions					PASS

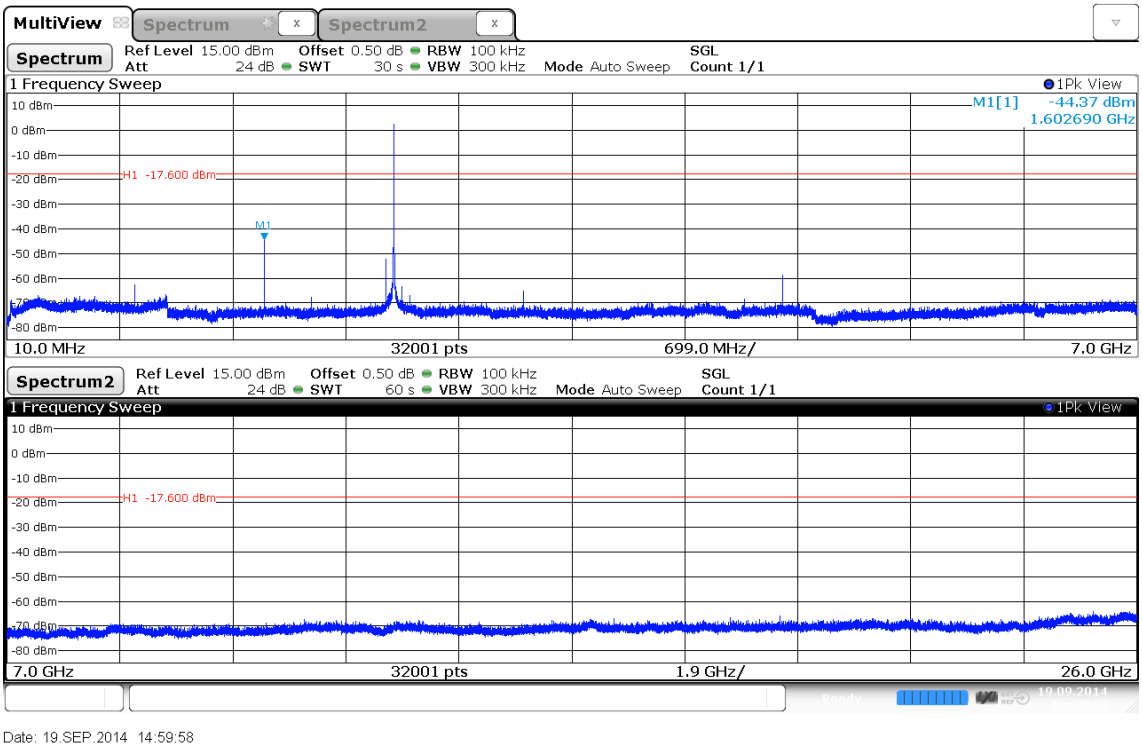
Comments:

Conducted spurious emissions – F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2404 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (DA 00-705 Meas Guidance)
Note 2:	conducted measurement



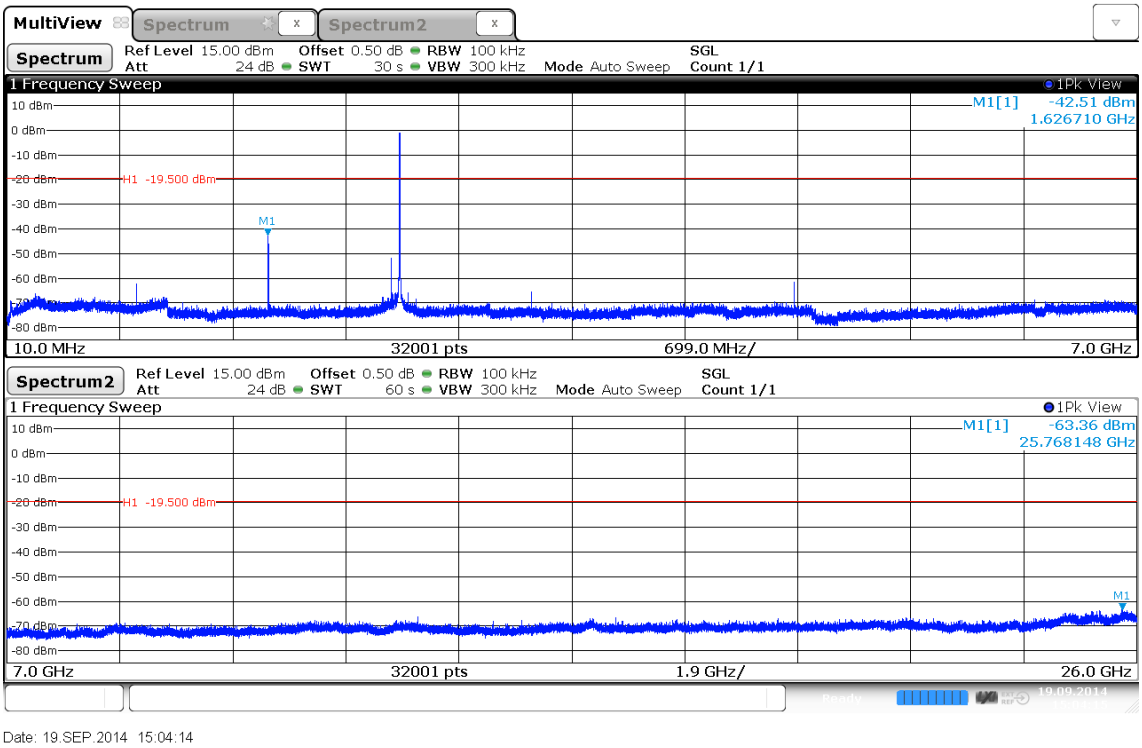
Date: 19.SEP.2014 14:59:58

Conducted spurious emissions – F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2440 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (DA 00-705 Meas Guidance)
Note 2:	conducted measurement



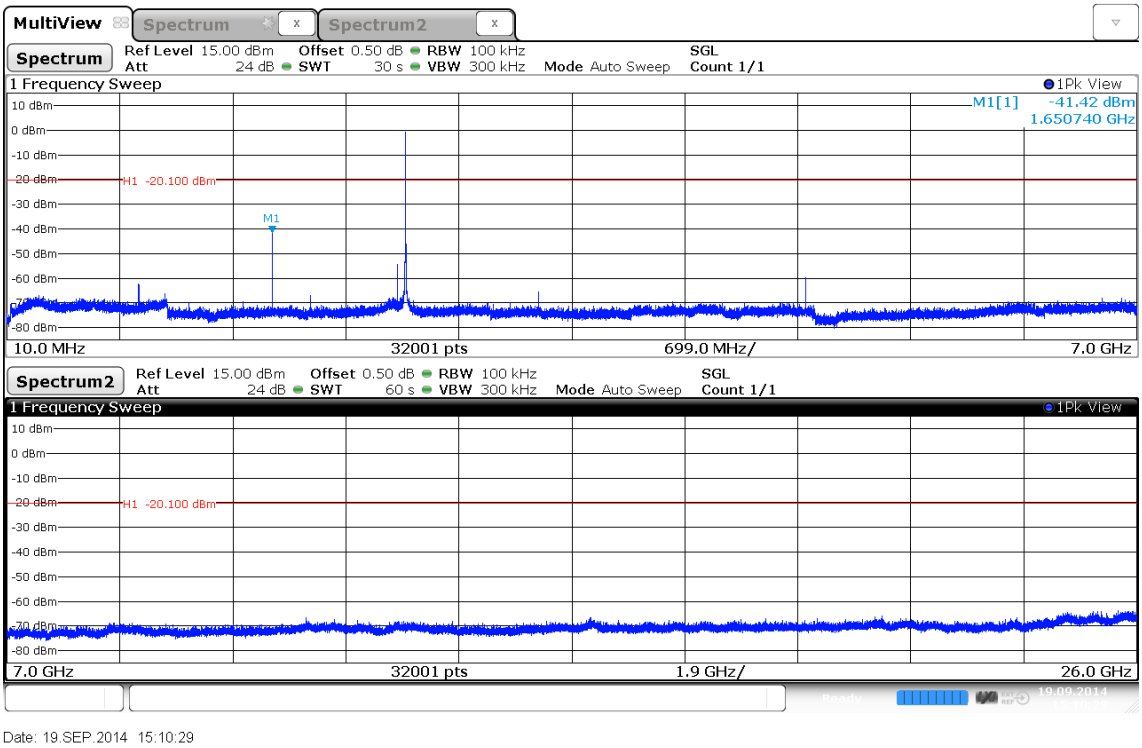
Date: 19.SEP.2014 15:04:14

Conducted spurious emissions – F_{HIGH}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1405-3862

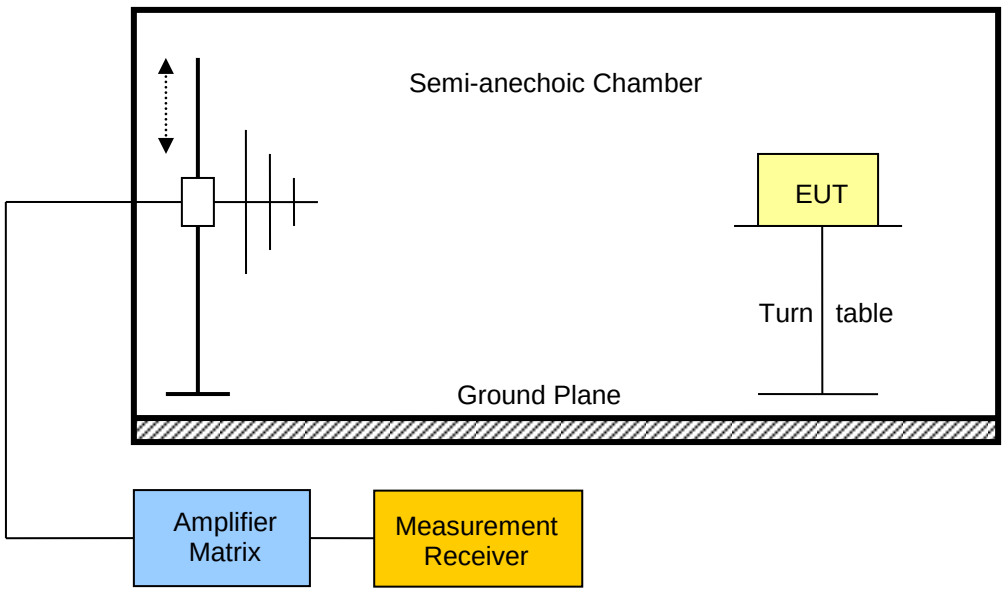
Applicant:	KONDO KAGAKU CO., LTD.
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Wilfried Treffke
Test Conditions:	Tnom / Vnom
Mode:	Tx, FSK, 2476 MHz, modulated
Test Date:	2014-09-19
Verdict:	PASS
Note 1:	Spurious in non-restricted frequency bands (DA 00-705 Meas Guidance)
Note 2:	conducted measurement



Date: 19.SEP.2014 15:10:29

3.9 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated emissions acc. FCC 47 CFR 15.247 / IC RSS-210				**Verdict: PASS**
Test according referenced standards		Reference Method		
		FCC 15.247(d) / IC RSS-210 A8.5		
Test according to measurement reference		Reference Method		
		FCC Public Notice DA 00-705 / ANSI C63.4		
Test frequency range		Tested frequencies		
		30 MHz – 10th Harmonic		
Limits				
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)). When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.				
Test setup				



Test procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span it set according to measurement range 3. Resolution bandwidth below 1 GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1 MHz with peak/average detector is used above 1 GHz 4. Markers are set to peak emission levels within restricted bands

Test results

Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F_{LOW}	2404	Single	2355	46.98	pk	ver	74.00	3	-27.02
F_{LOW}	2404	Single	2355	43.45	RMS	ver	54.00	3	-10.55
F_{LOW}	2404	Single	4808	48.92	pk	hor	74.00	3	-25.08
F_{LOW}	2404	Single	4808	52.95	pk	ver	74.00	3	-21.05
F_{LOW}	2404	Single	4808	39.84	avg	ver	54.00	3	-14.16
F_{LOW}	2404	Single	4808	47.08	pk	ver	74.00	3	-26.92
F_{LOW}	2404	Single	4808	39.84	avg	ver	54.00	3	-14.16
F_{MID}	2440	Single	4875	52.46	pk	ver	74.00	3	-21.54
F_{HIGH}	2476	Single	4808	53.47	pk	ver	74.00	3	-20.53
F_{HIGH}	2476	Single	4809	46.82	pk	ver	74.00	3	-27.18
F_{HIGH}	2476	Single	4809	38.23	avg	ver	54.00	3	-15.77
F_{HIGH}	2476	Single	4952	54.36	pk	hor	74.00	3	-19.64
F_{HIGH}	2476	Single	4952	50.32	avg	hor	54.00	3	-03.68

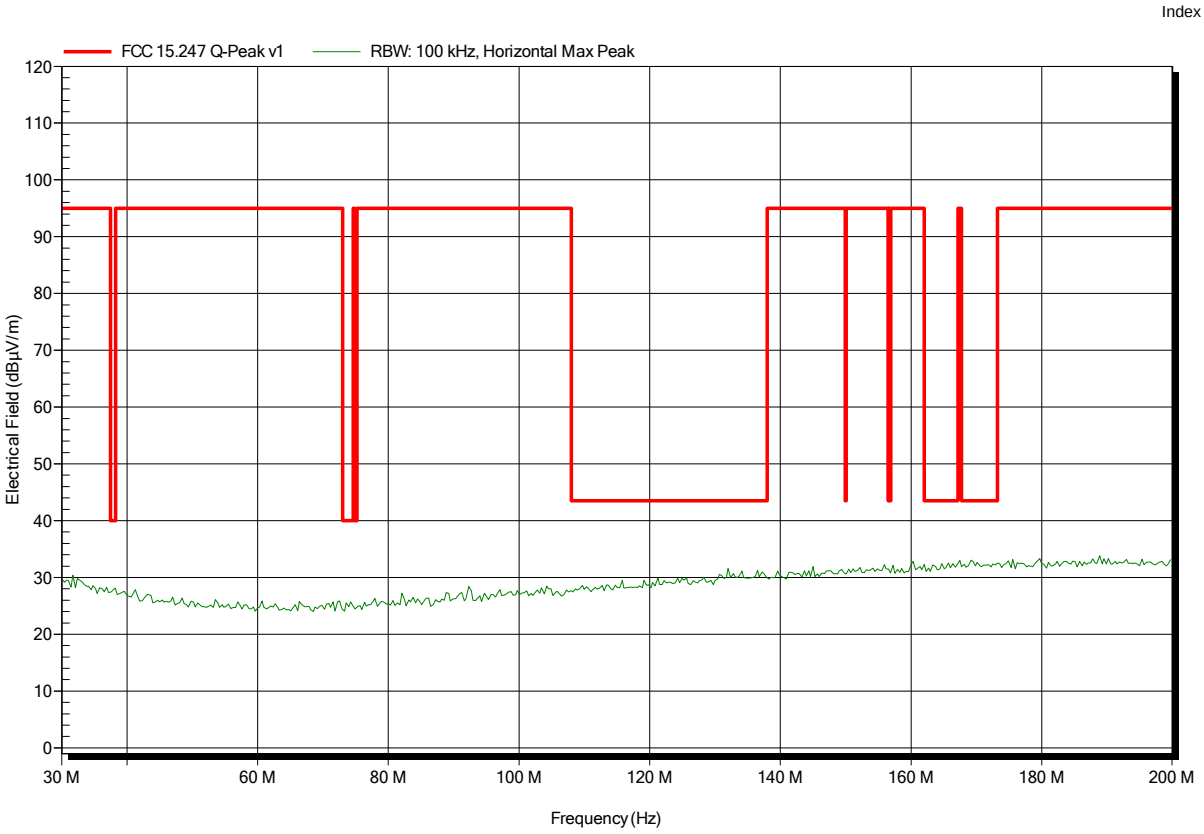
Comments: * Physical distance between EUT and measurement antenna.

ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	worst case

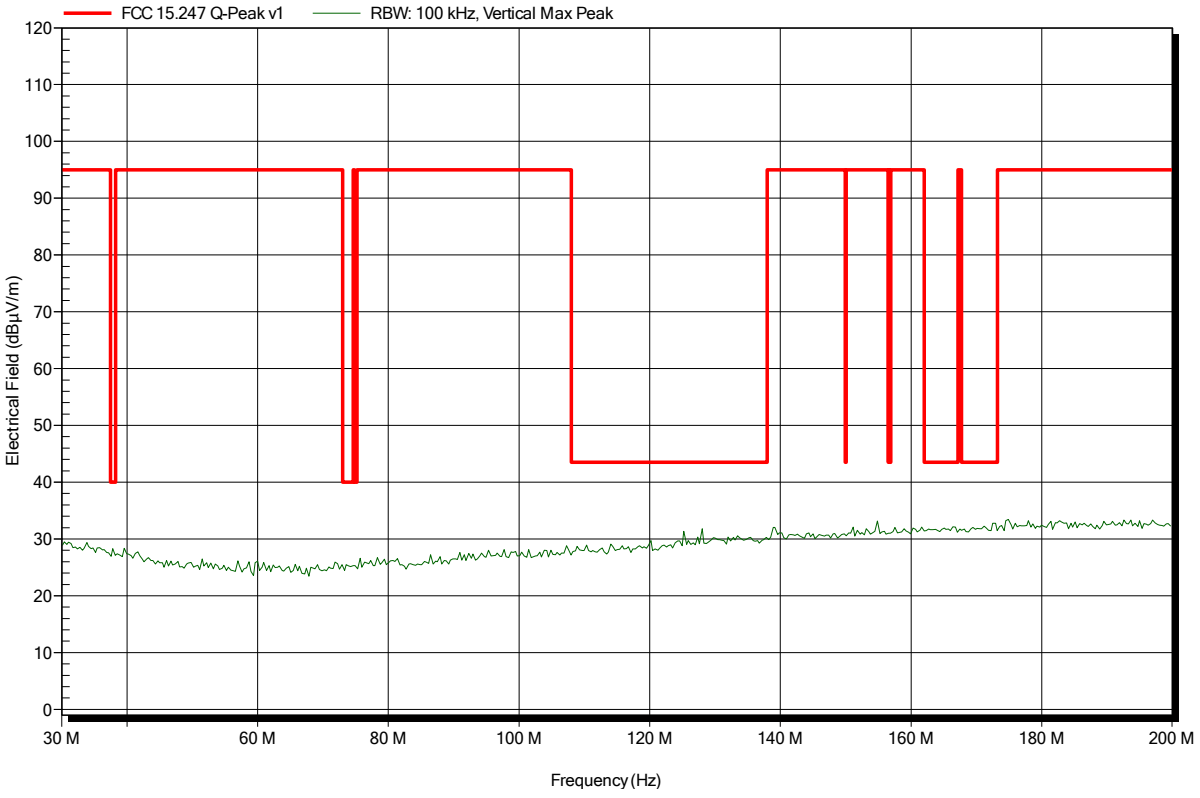


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	worst case

Index 2

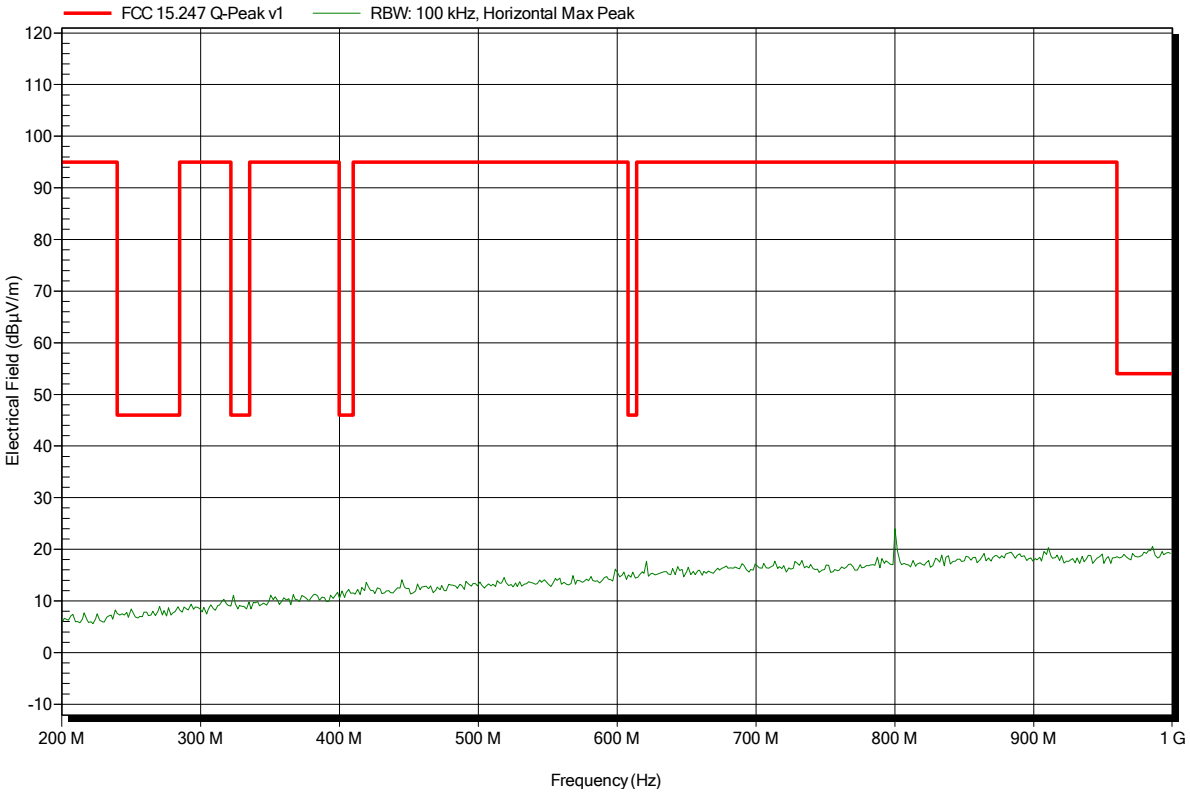


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	worst case

Index 3

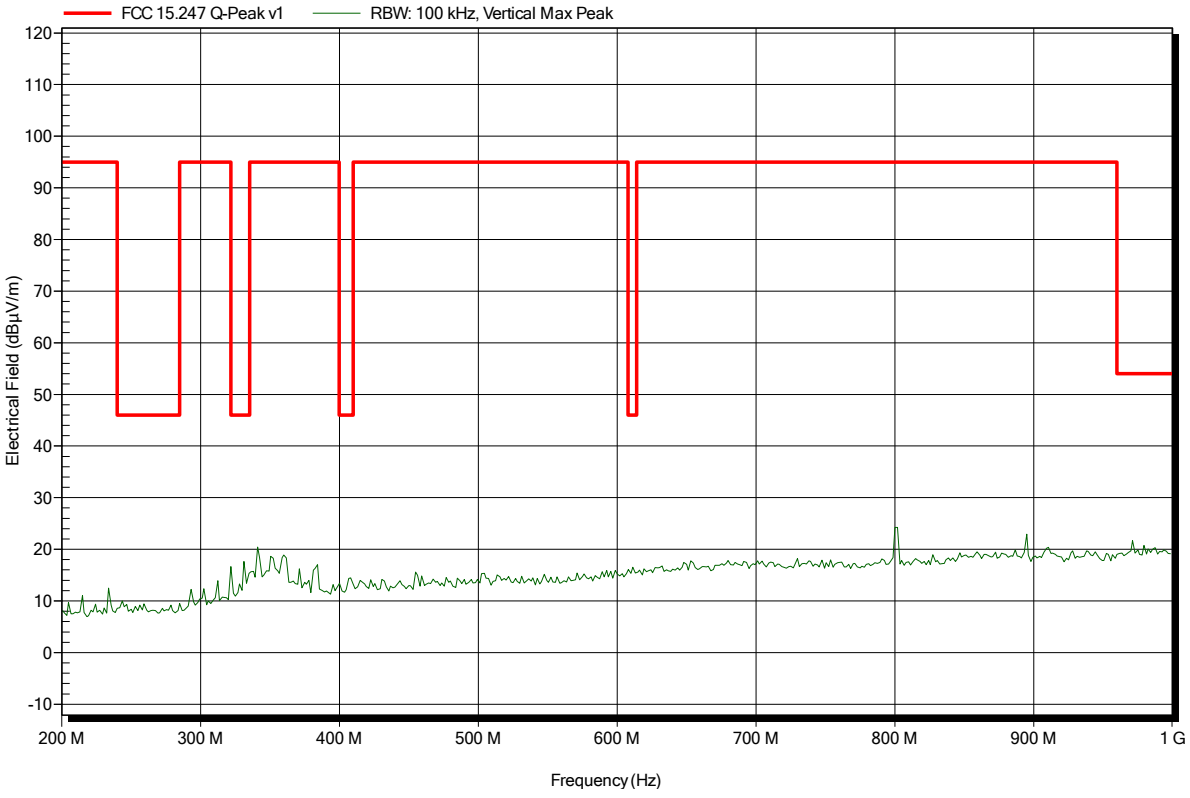


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	worst case

Index 4

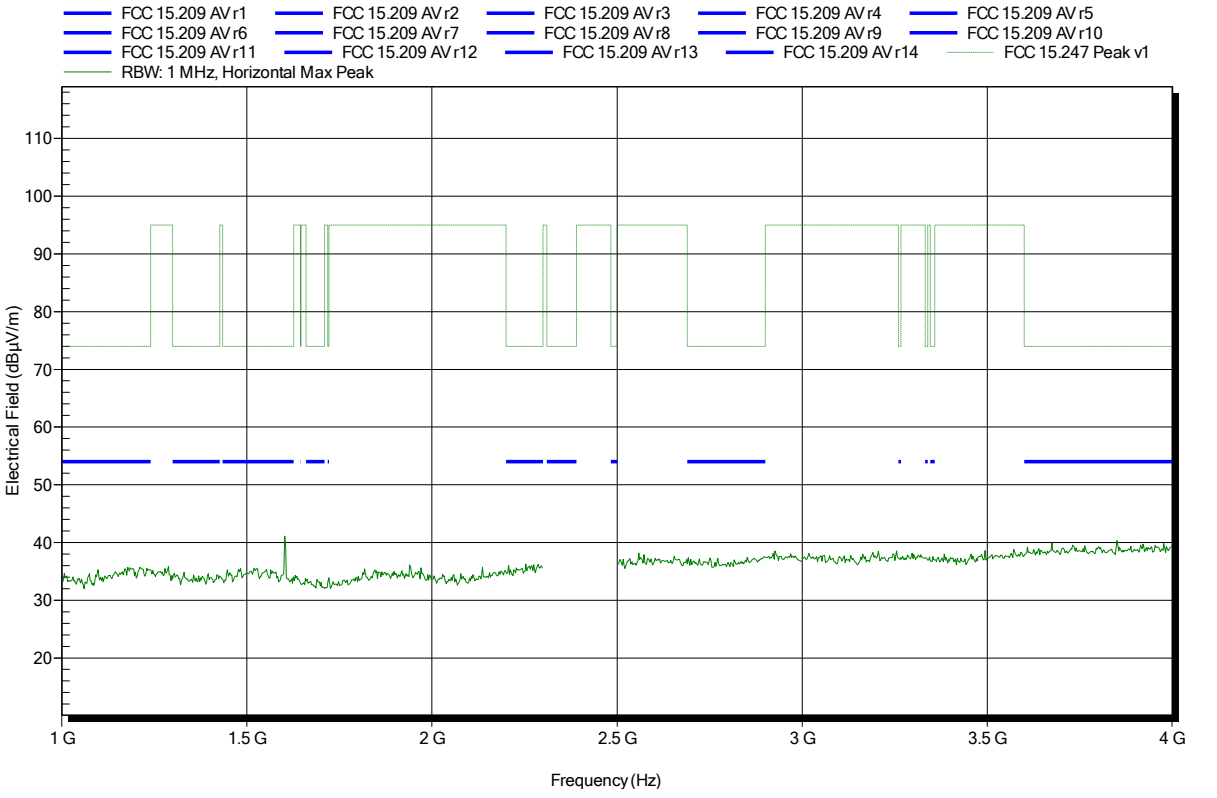


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	

Index 17

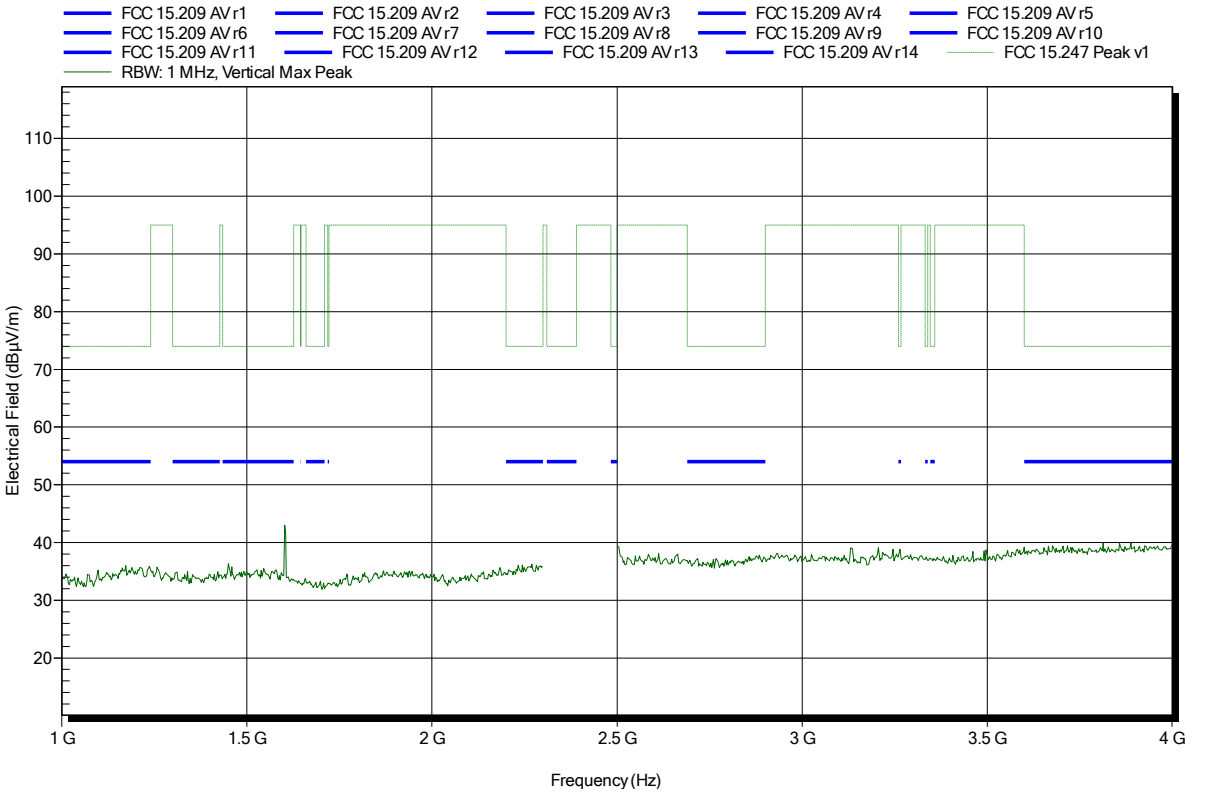


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	

Index 20

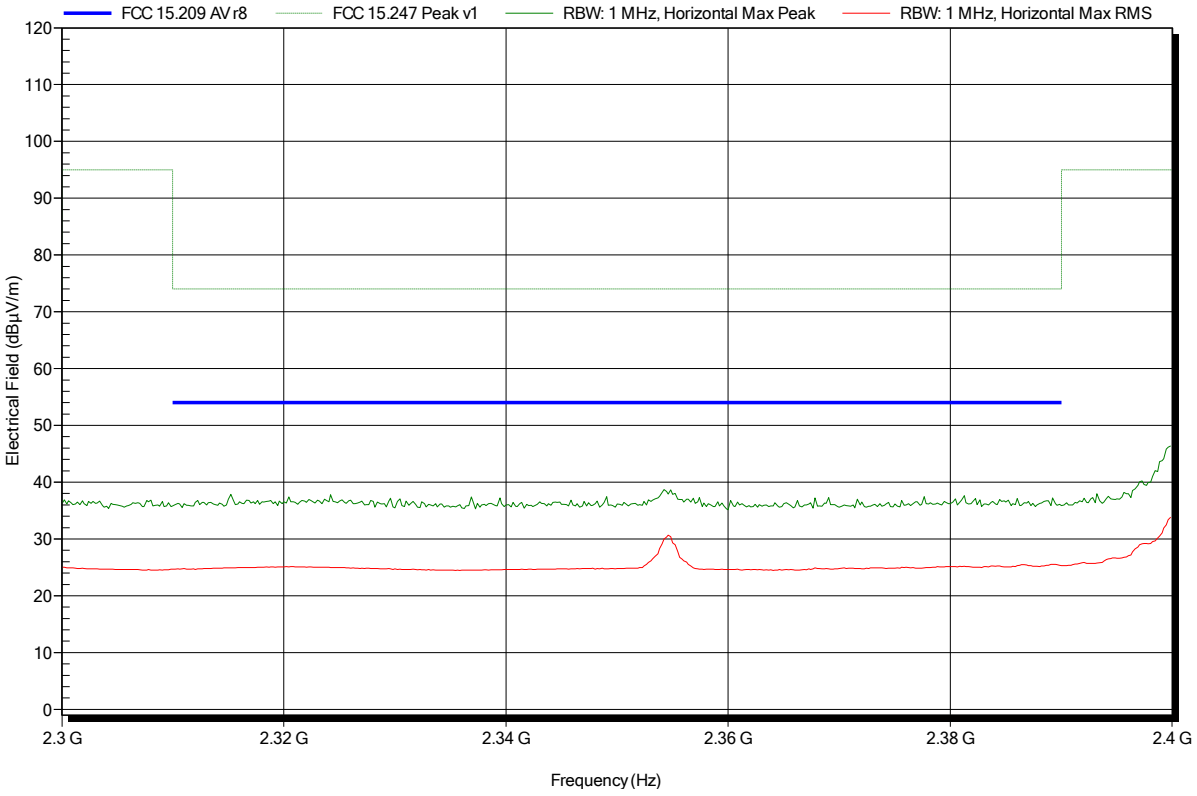


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	lower bandedge

Index 18

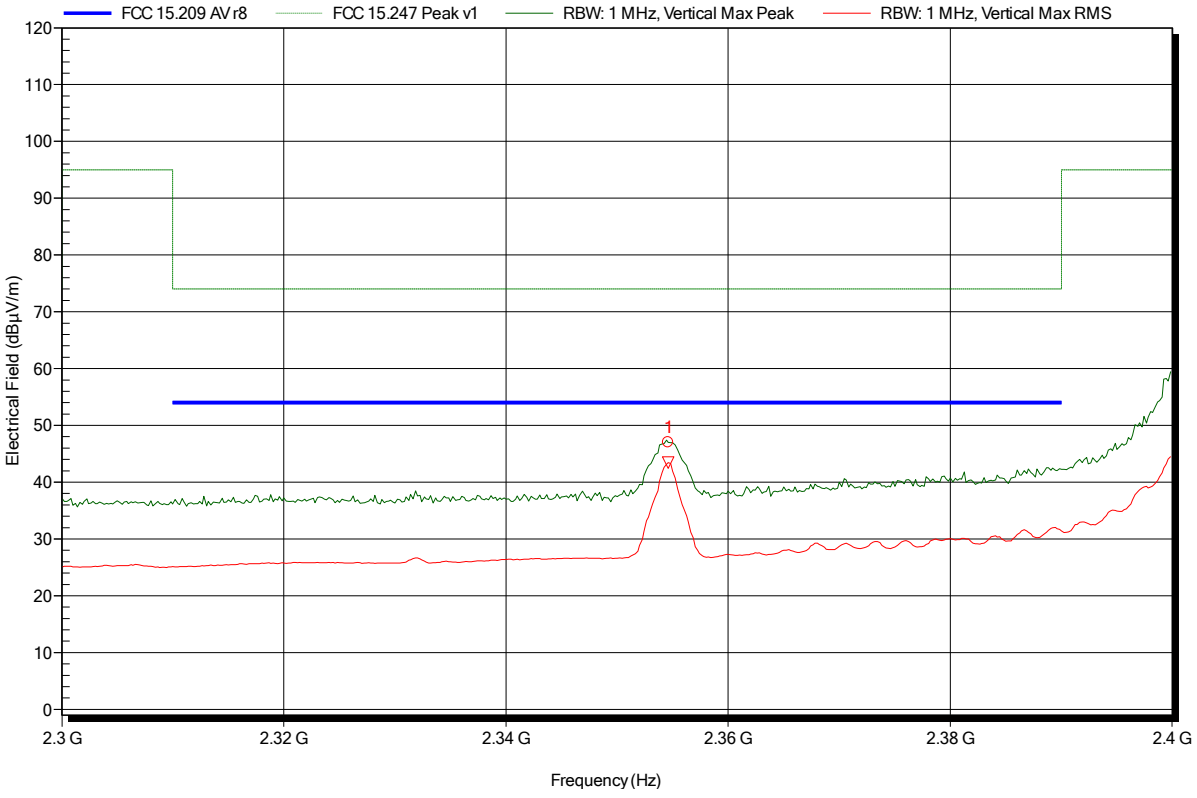


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	lower bandedge

Index 21



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.355 GHz	46.98 dBµV/m	74 dBµV/m	-27.02 dB	Pass

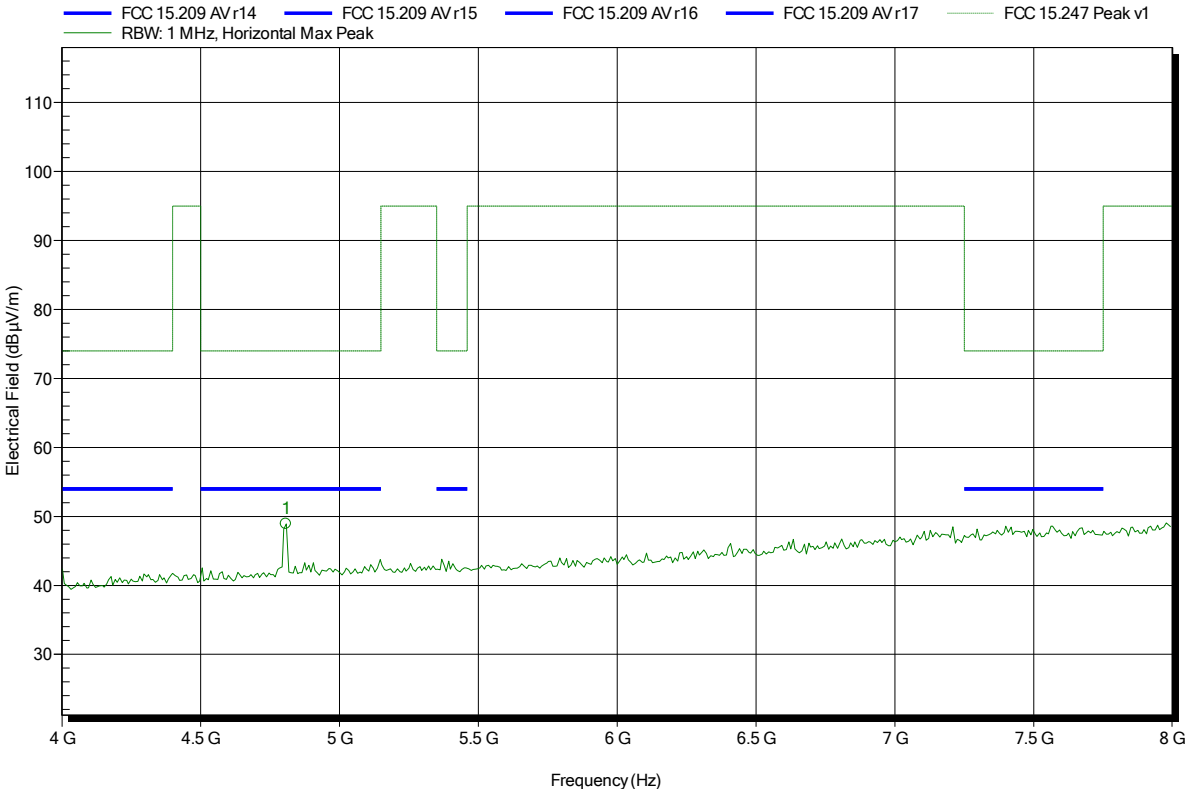
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.355 GHz	43.45 dBµV/m	54 dBµV/m	-10.55 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	

Index 19



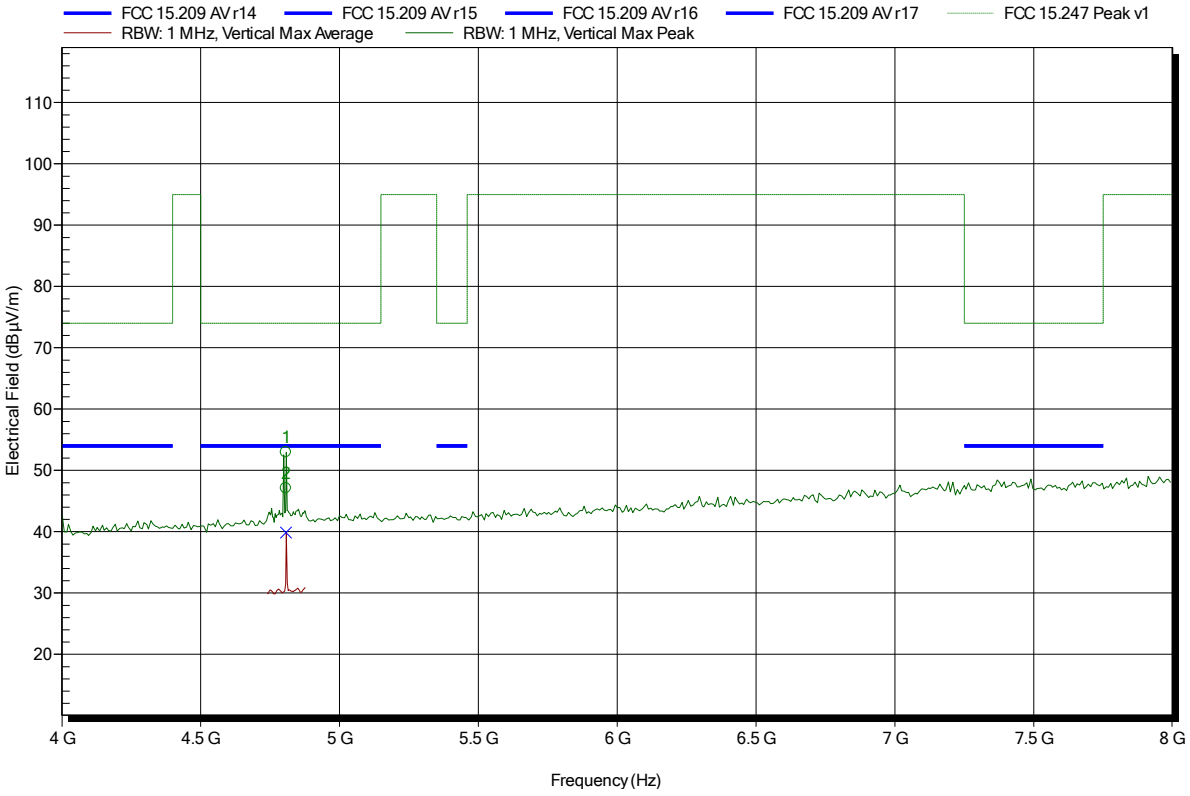
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.808 GHz	48.92 dBµV/m	74 dBµV/m	-25.08 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	

Index 22



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.808 GHz	52.95 dBµV/m	74 dBµV/m	-21.05 dB	Pass
4.808 GHz	47.08 dBµV/m	74 dBµV/m	-26.92 dB	Pass

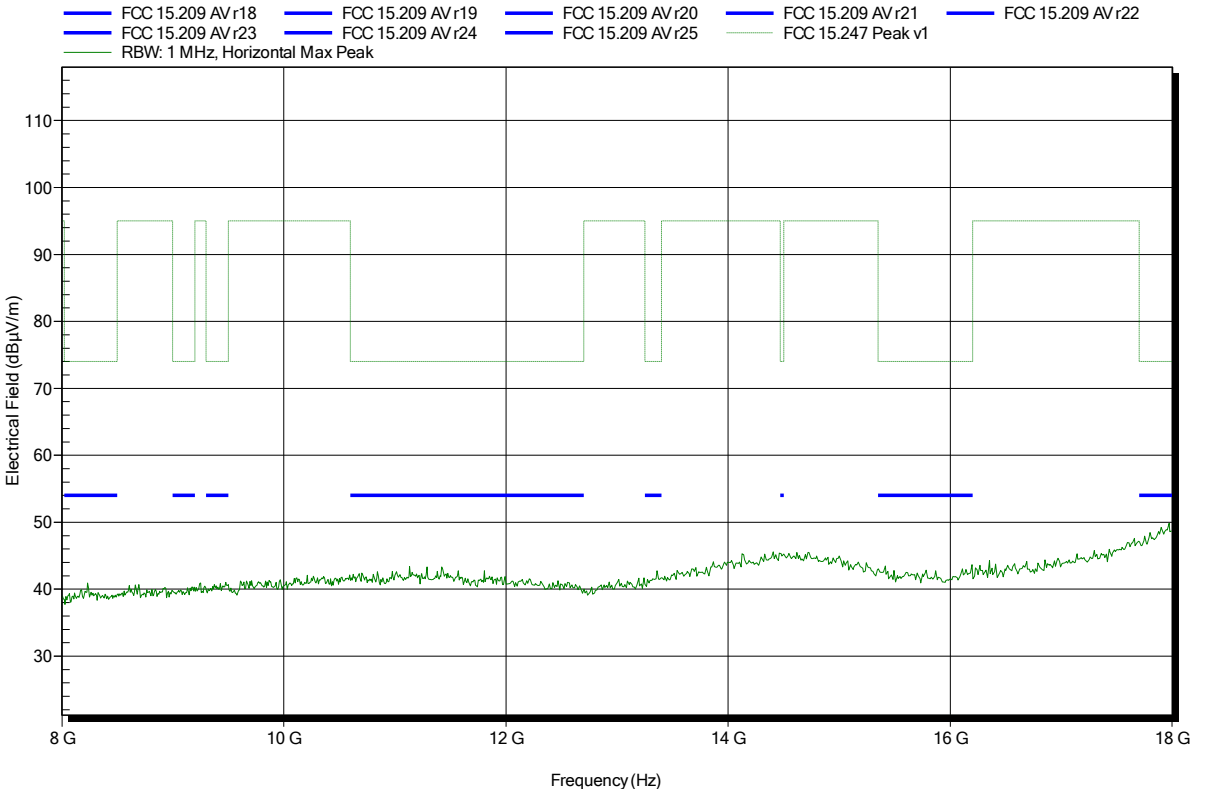
Frequency	Average	Average Limit	Average Difference	Average Status
4.808 GHz	39.84 dBµV/m	54 dBµV/m	-14.16 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	

Index 35

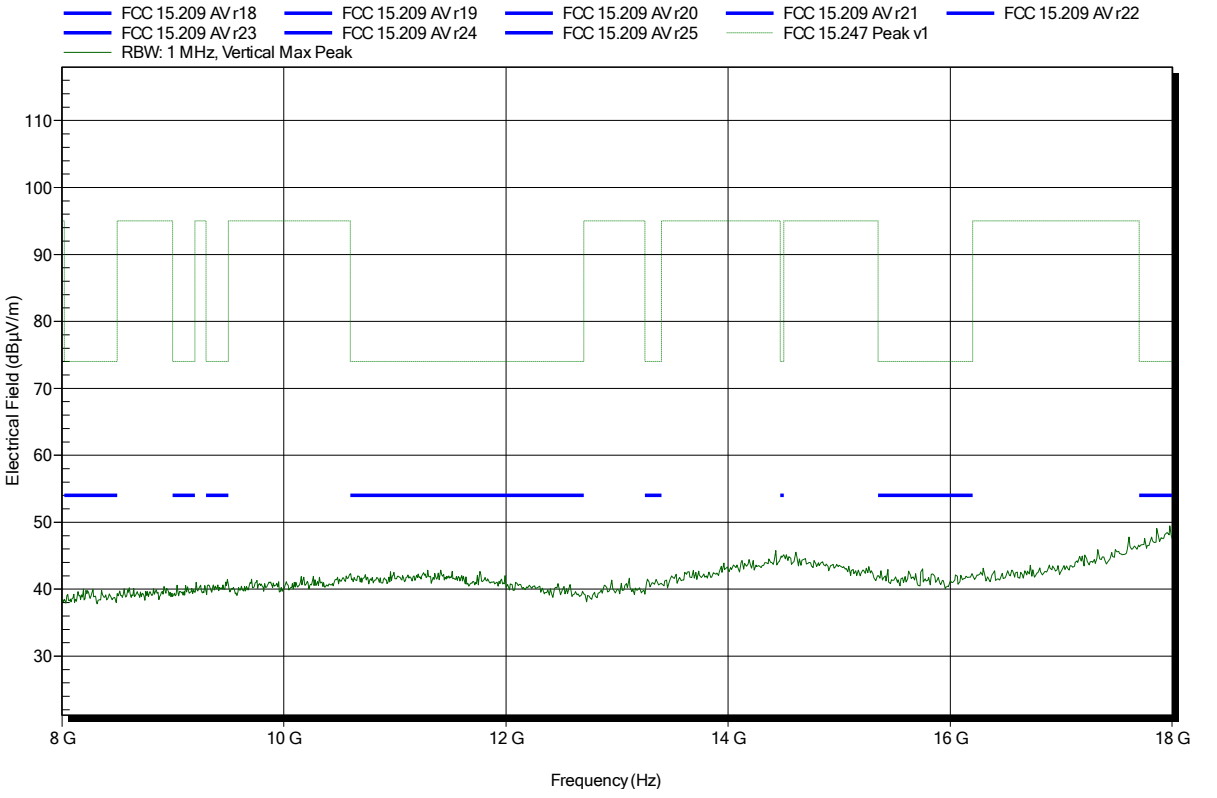


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	

Index 37

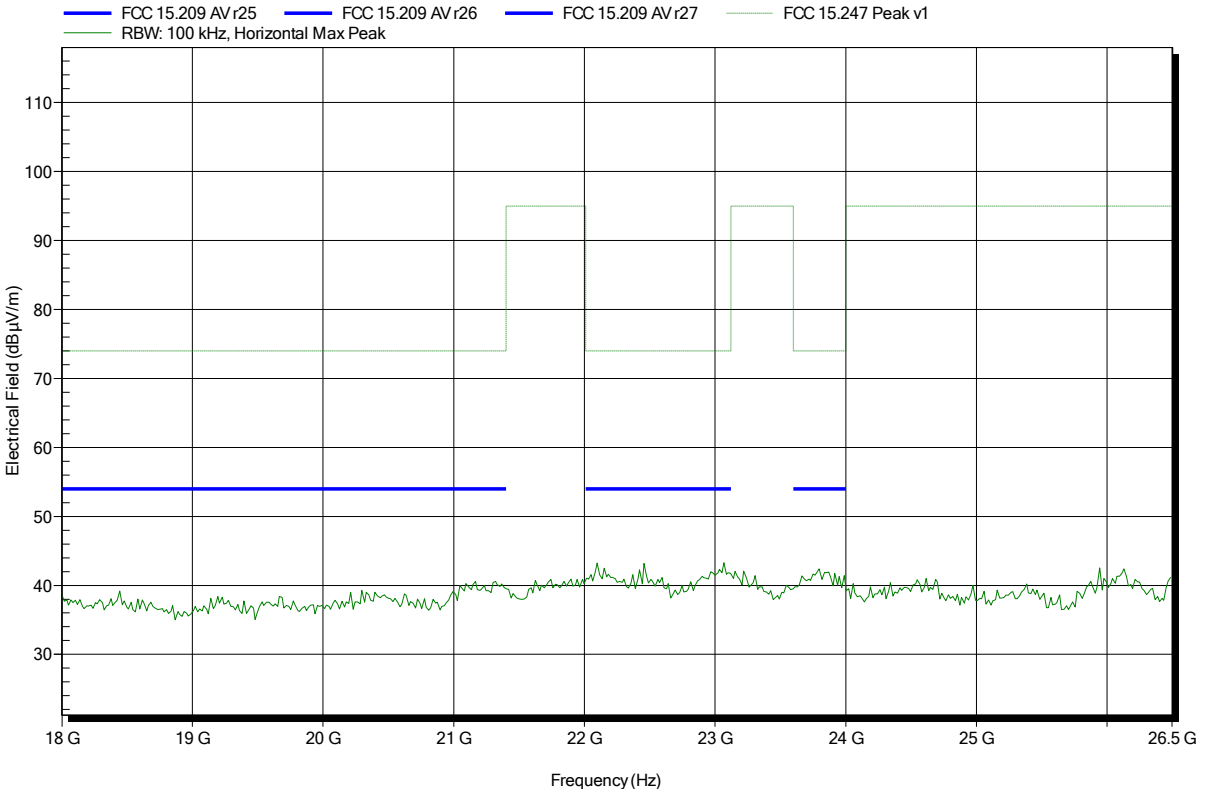


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	

Index 36

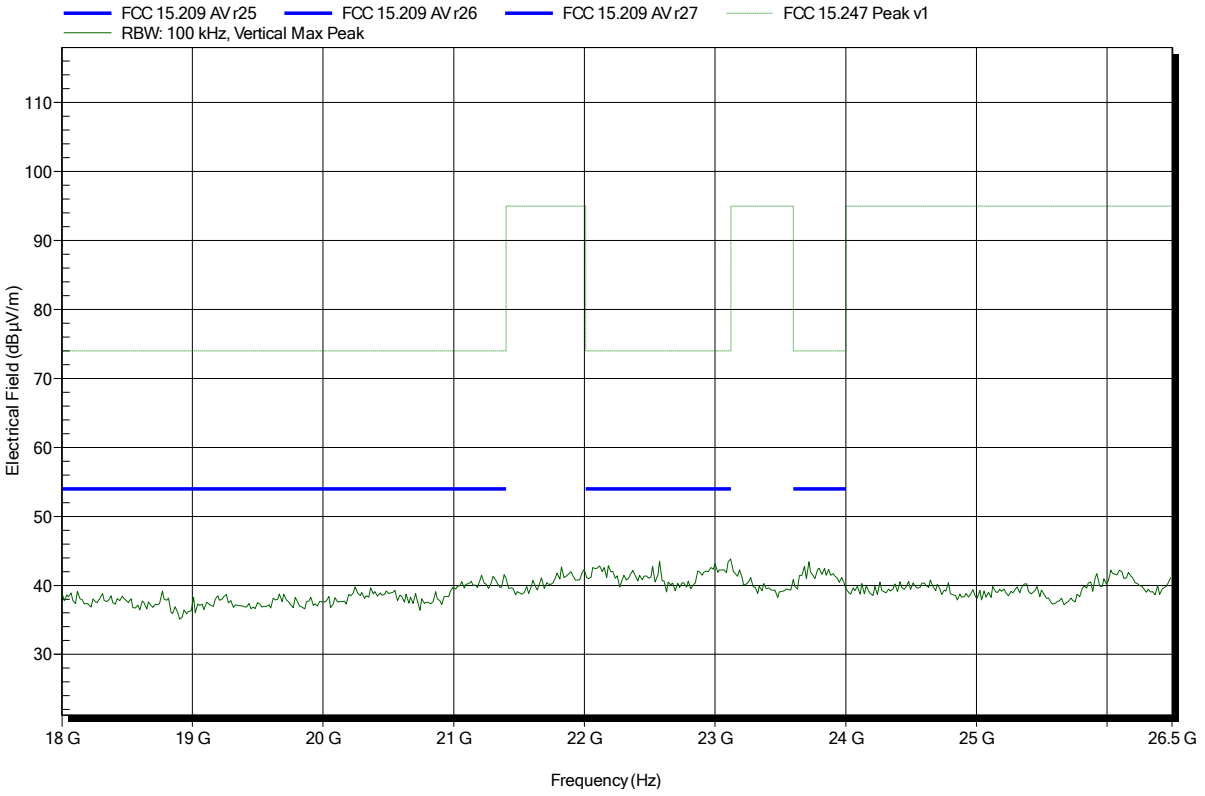


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m
Mode:	TX; 2404 MHz
Test Date:	2014-09-19
Note:	

Index 38

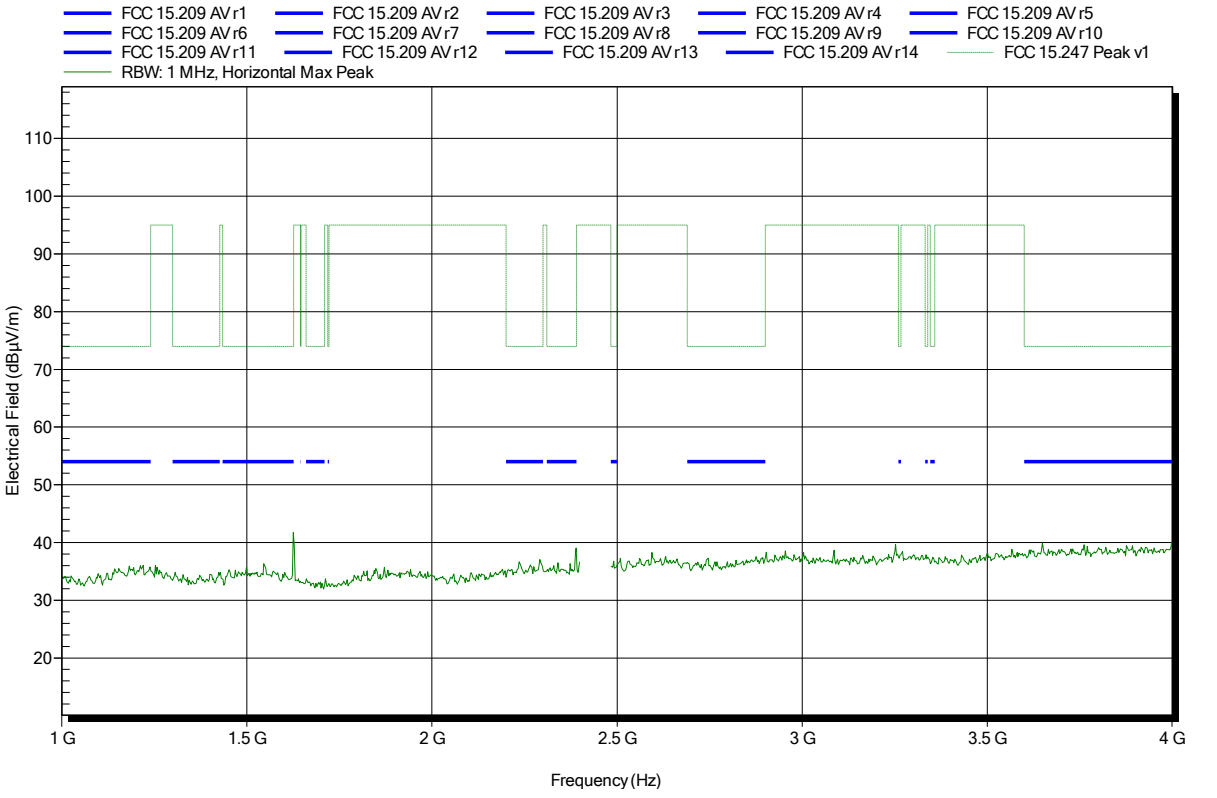


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; 2440 MHz
Test Date:	2014-09-19
Note:	

Index 23

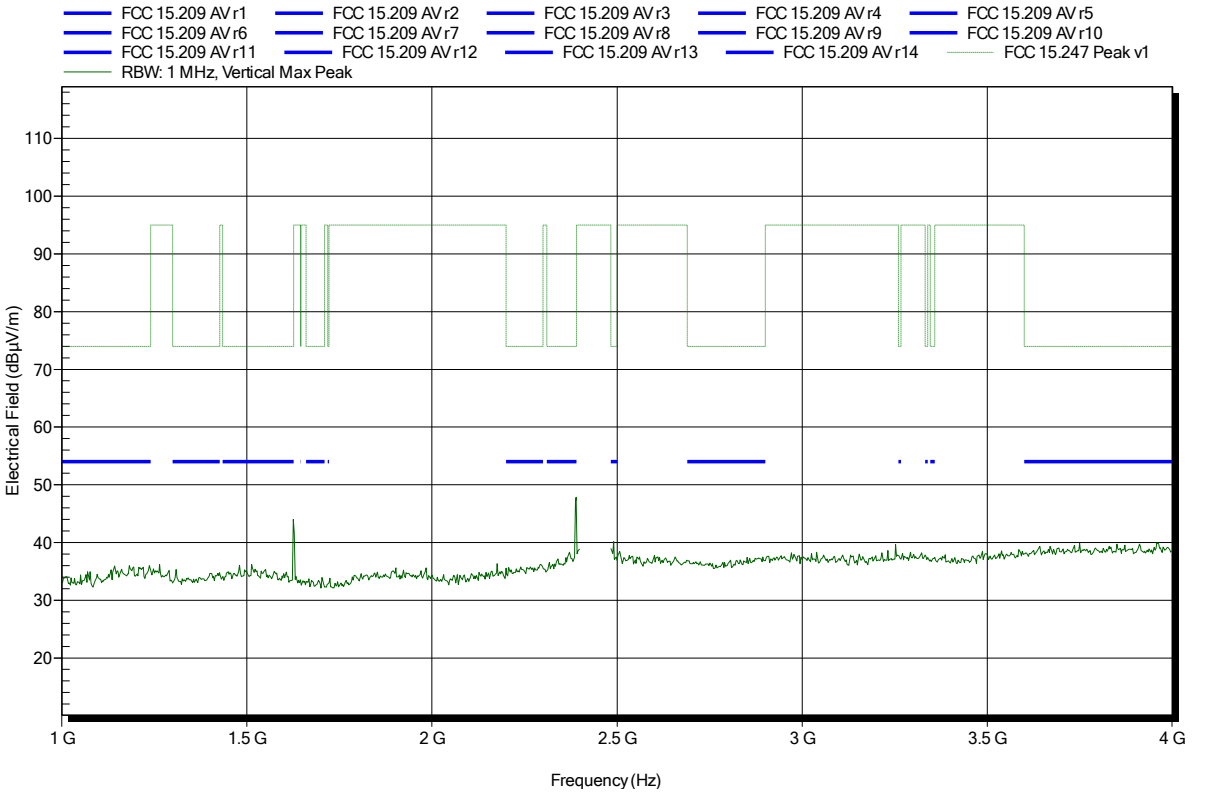


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; 2440 MHz
Test Date:	2014-09-19
Note:	

Index 25

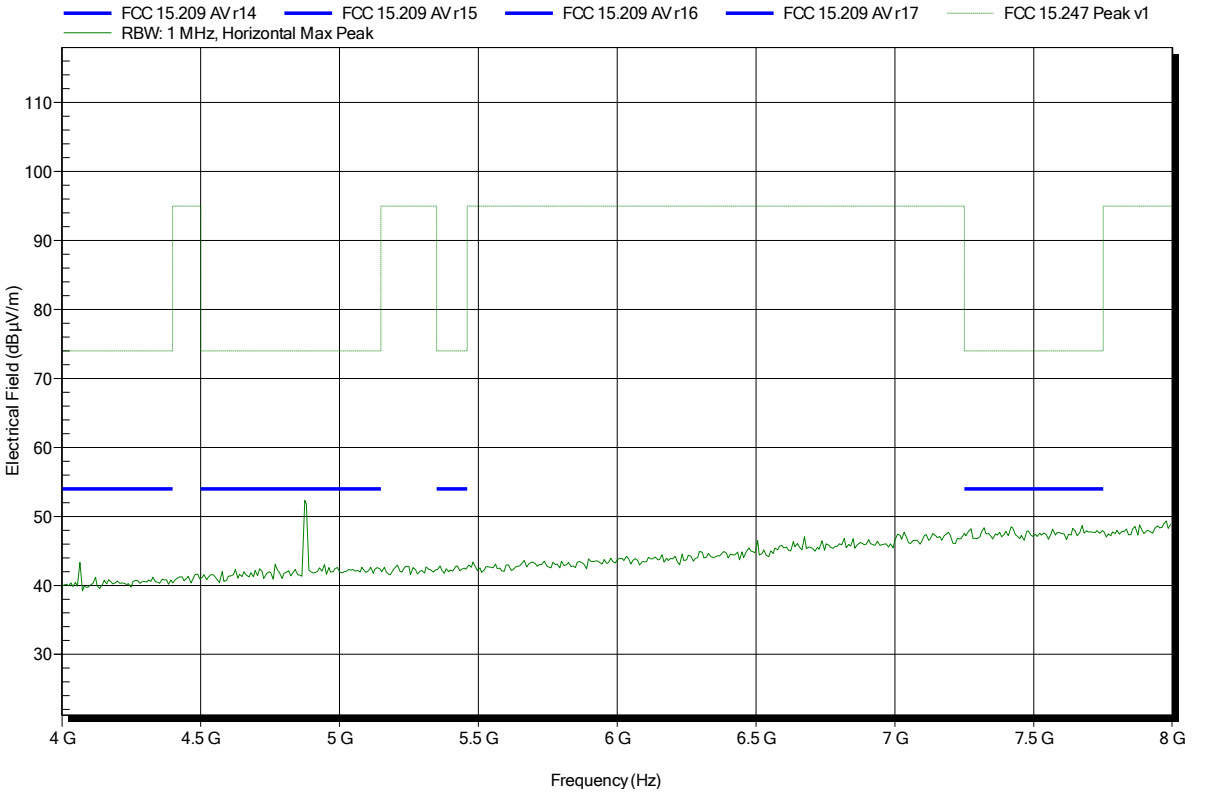


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; 2440 MHz
Test Date:	2014-09-19
Note:	

Index 24

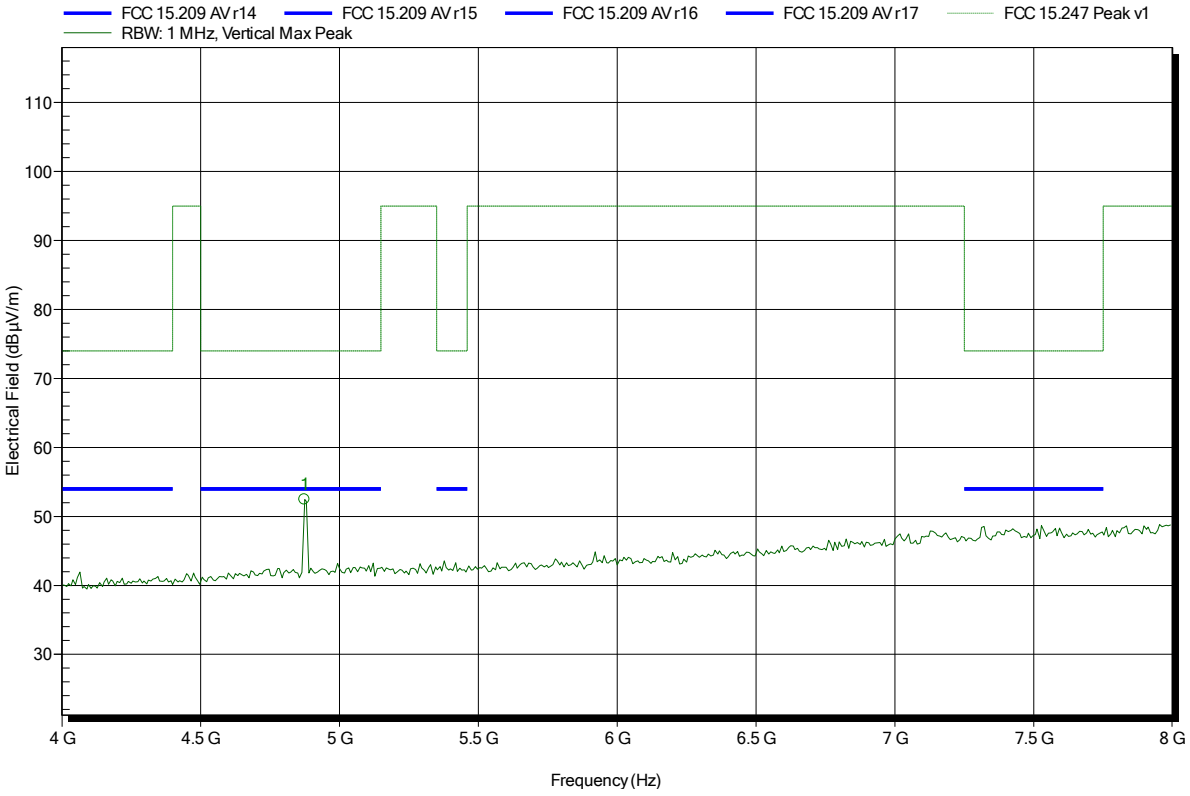


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; 2440 MHz
Test Date:	2014-09-19
Note:	

Index 26



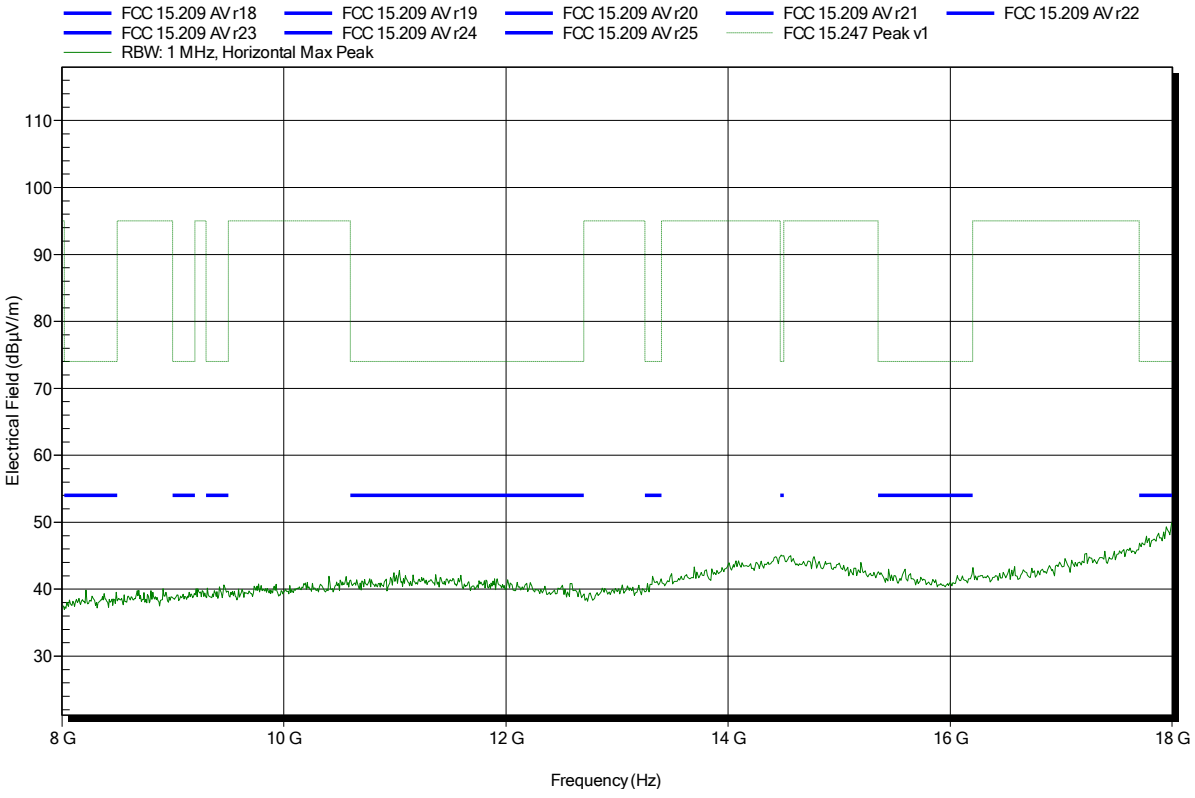
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.875 GHz	52.46 dBµV/m	74 dBµV/m	-21.54 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; 2440 MHz
Test Date:	2014-09-19
Note:	

Index 39

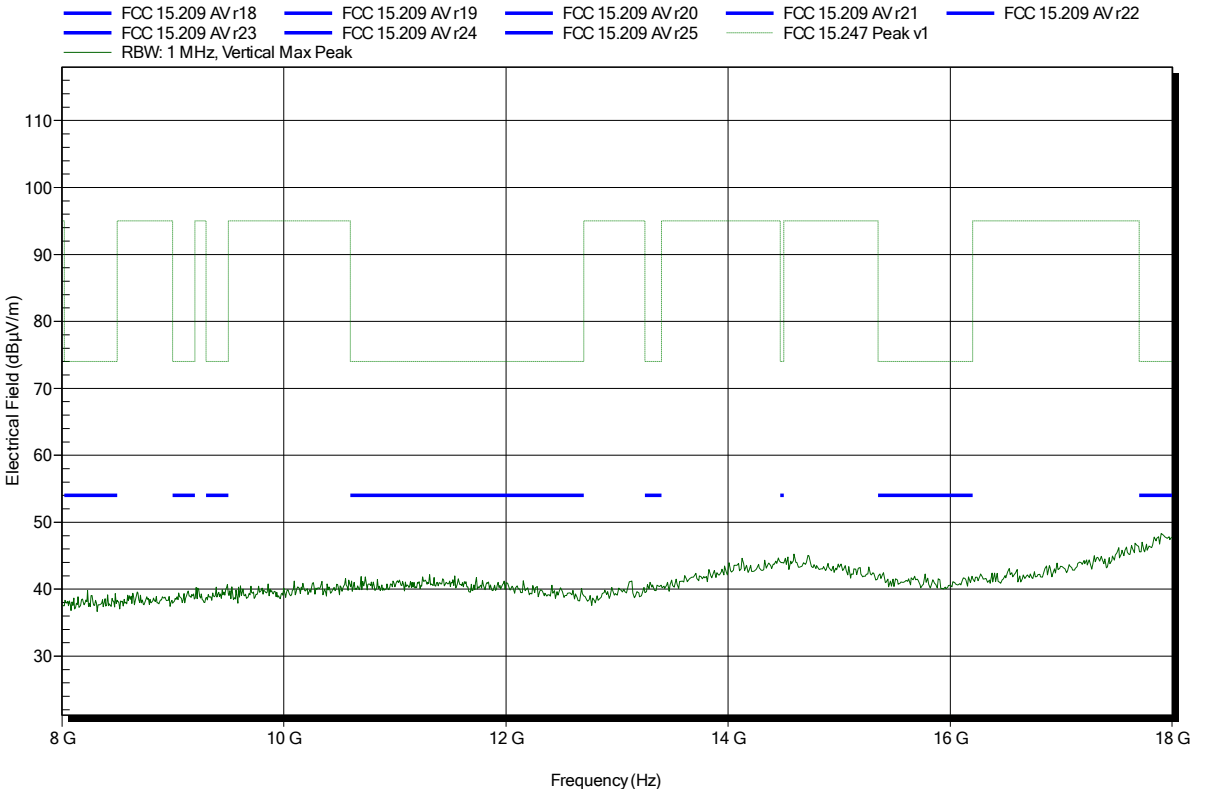


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; 2440 MHz
Test Date:	2014-09-19
Note:	

Index 41

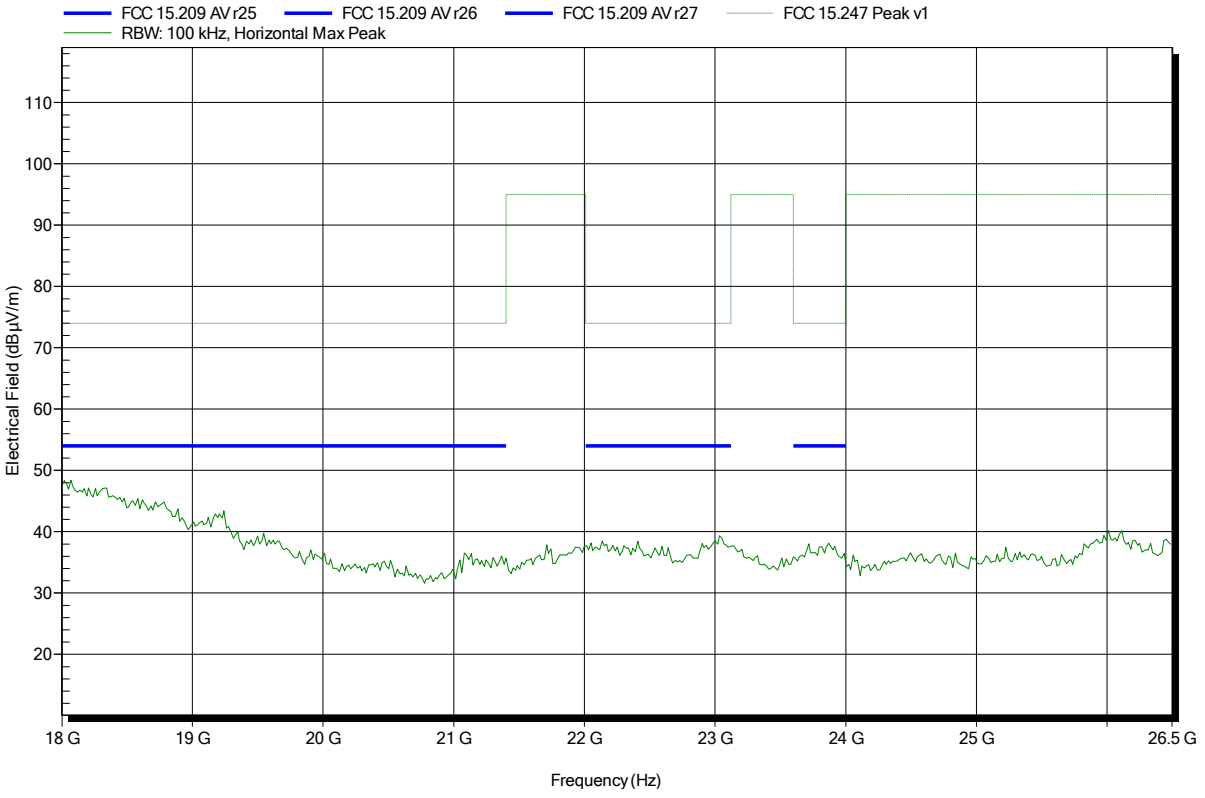


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m
Mode:	TX; 2440 MHz
Test Date:	2014-09-19
Note:	

Index 40

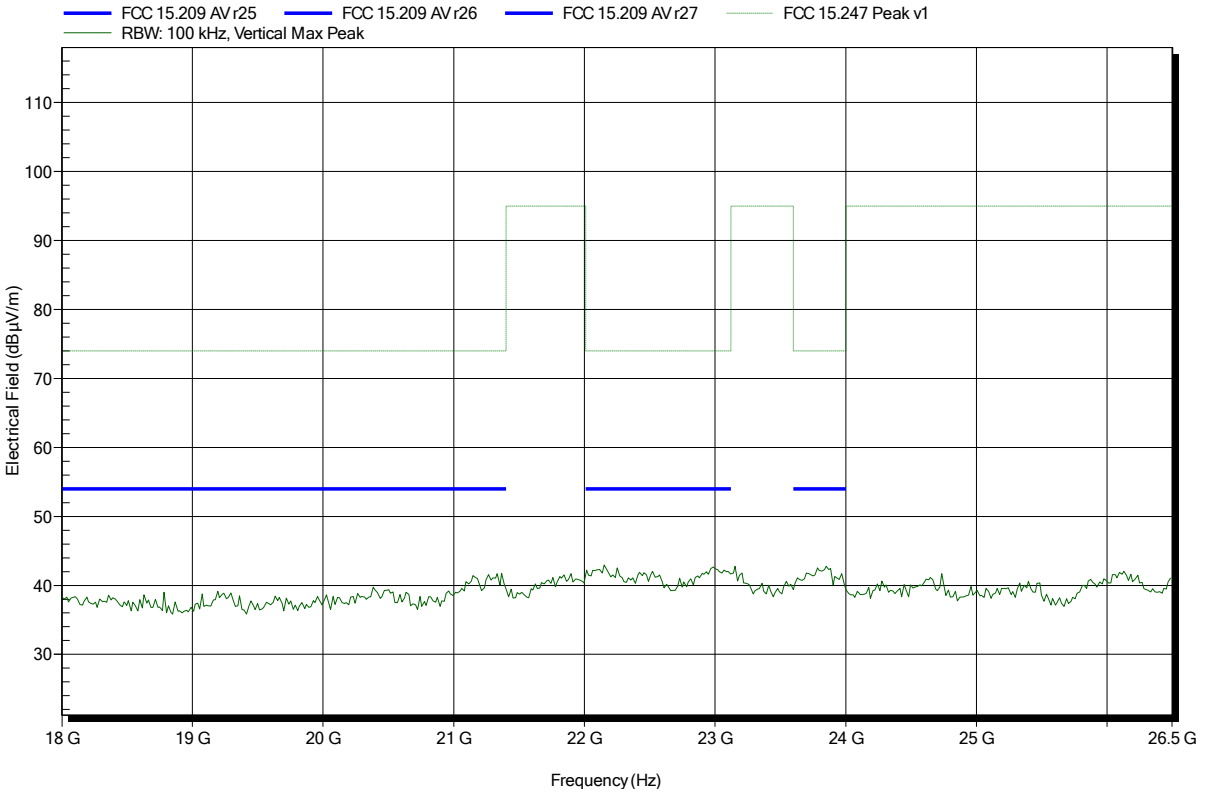


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m
Mode:	TX; 2440 MHz
Test Date:	2014-09-19
Note:	

Index 42

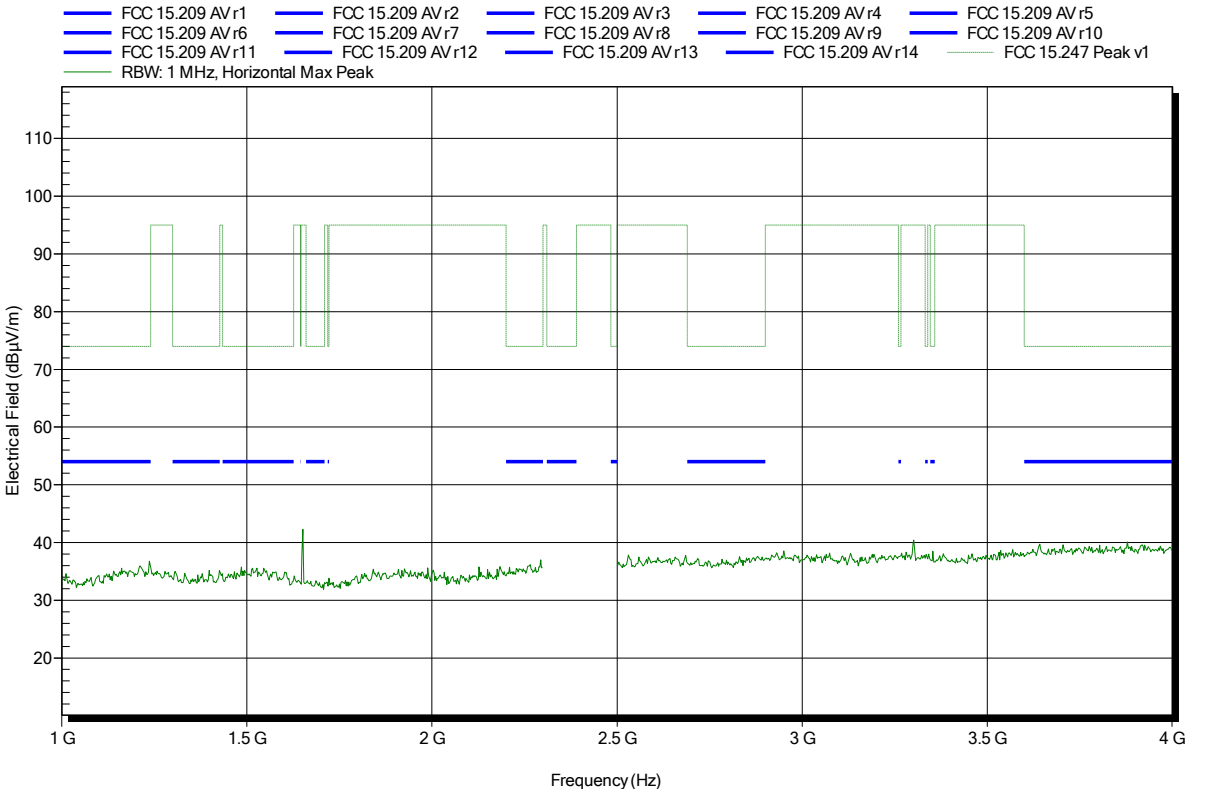


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	

Index 27

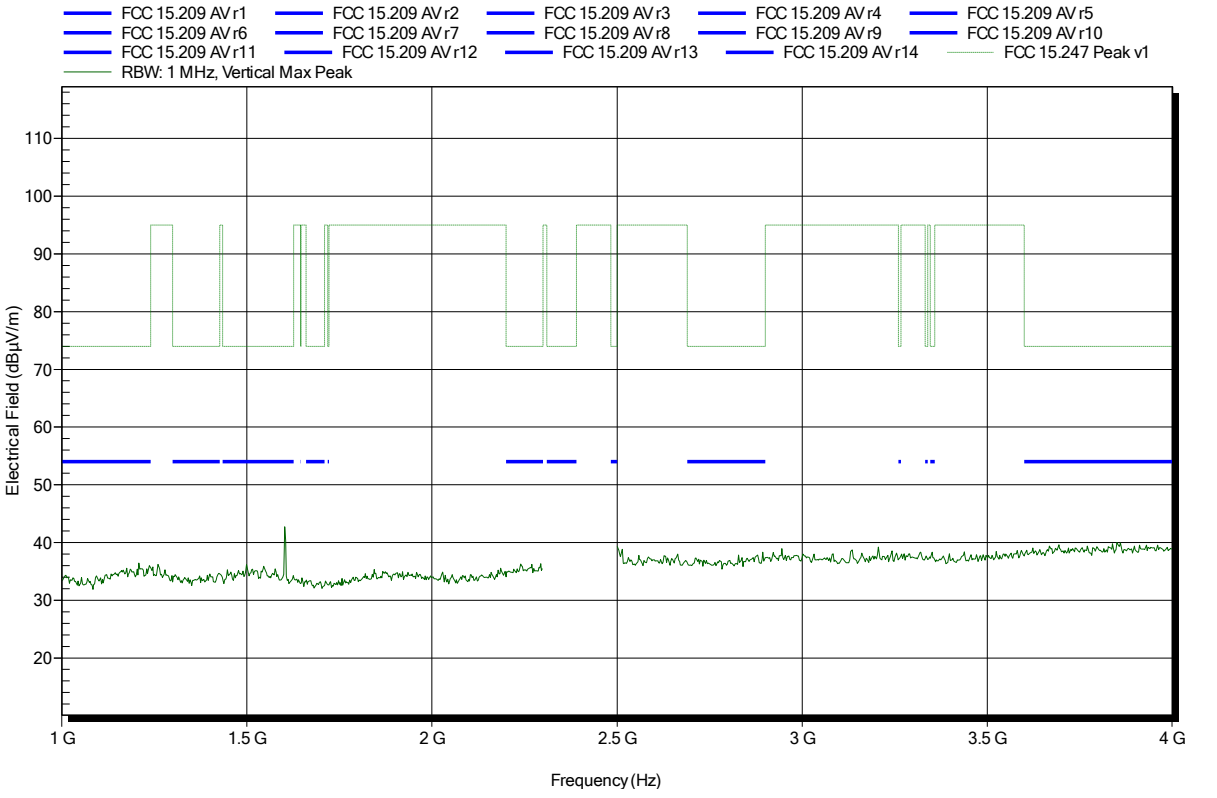


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	

Index 30

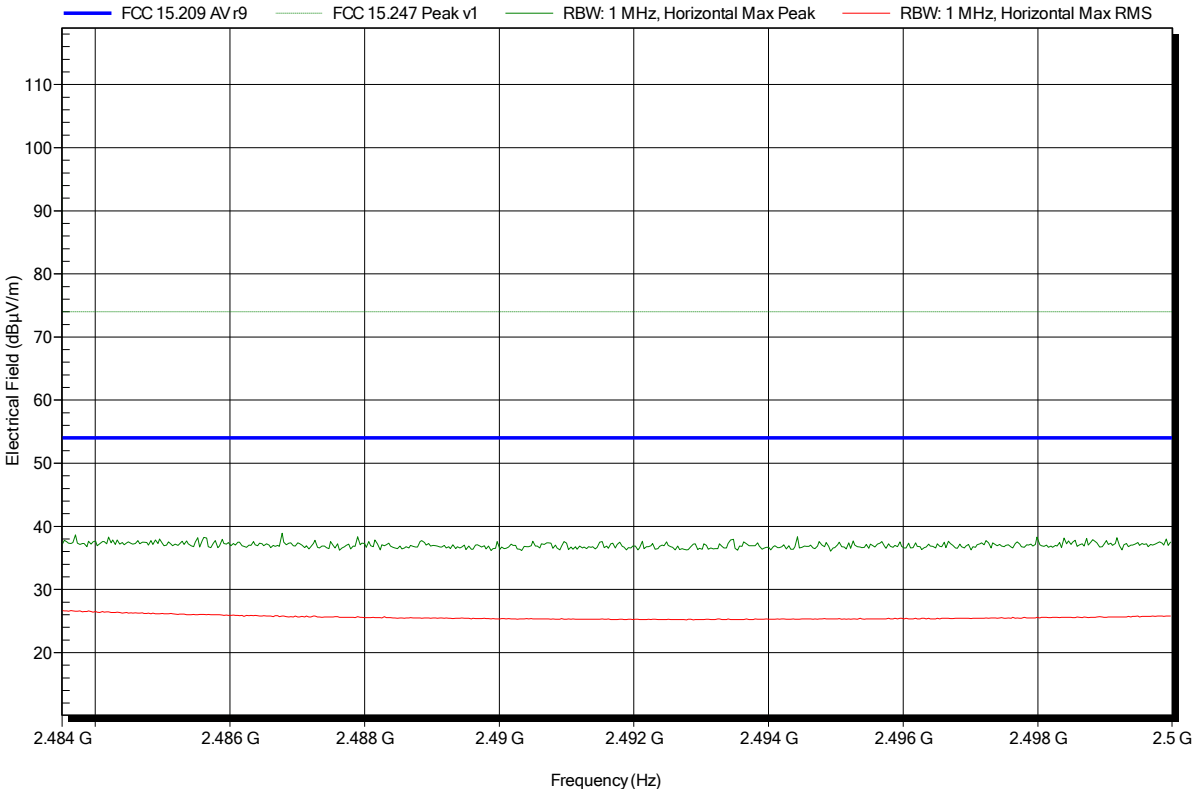


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	upper bandedge

Index 28

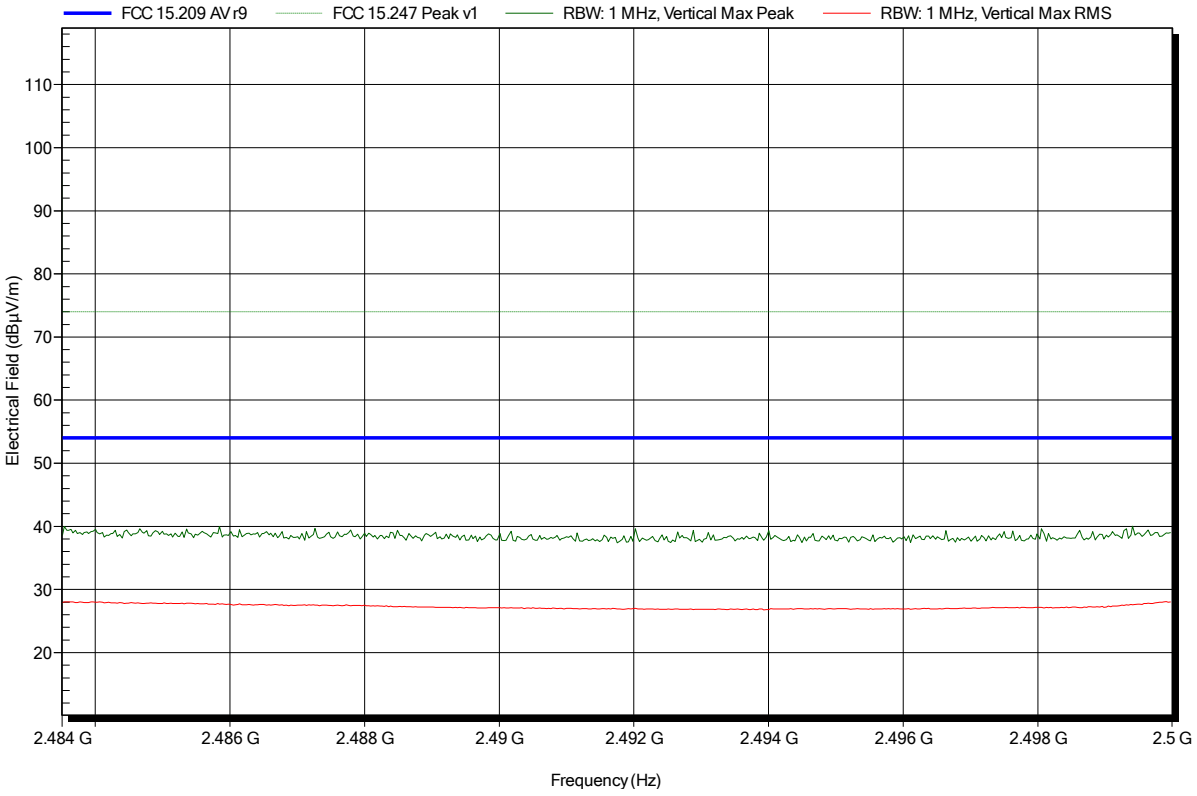


Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	upper bandedge

Index 31



Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
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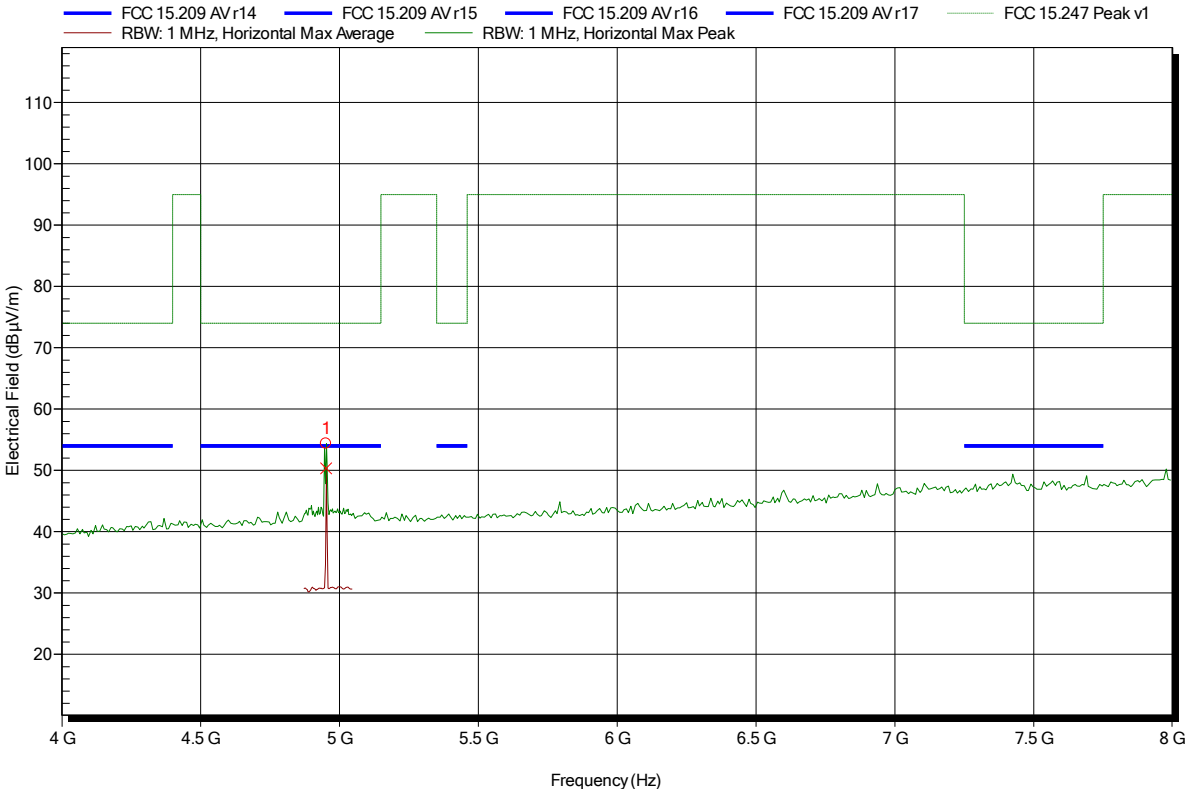
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	

Index 29



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.952 GHz	54.36 dBµV/m	74 dBµV/m	-19.64 dB	Pass

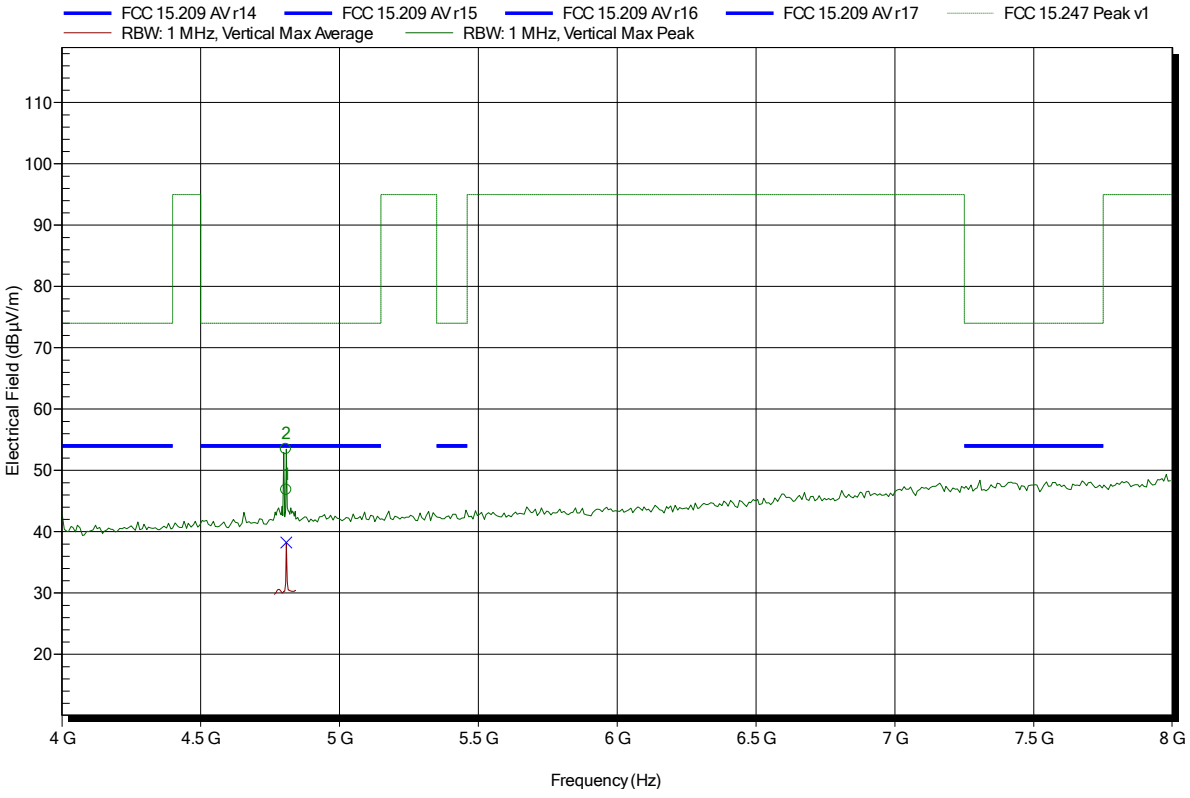
Frequency	Average	Average Limit	Average Difference	Average Status
4.952 GHz	50.32 dBµV/m	54 dBµV/m	-3.68 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	

Index 32



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.808 GHz	53.47 dBµV/m	74 dBµV/m	-20.53 dB	Pass
4.809 GHz	46.82 dBµV/m	74 dBµV/m	-27.18 dB	Pass

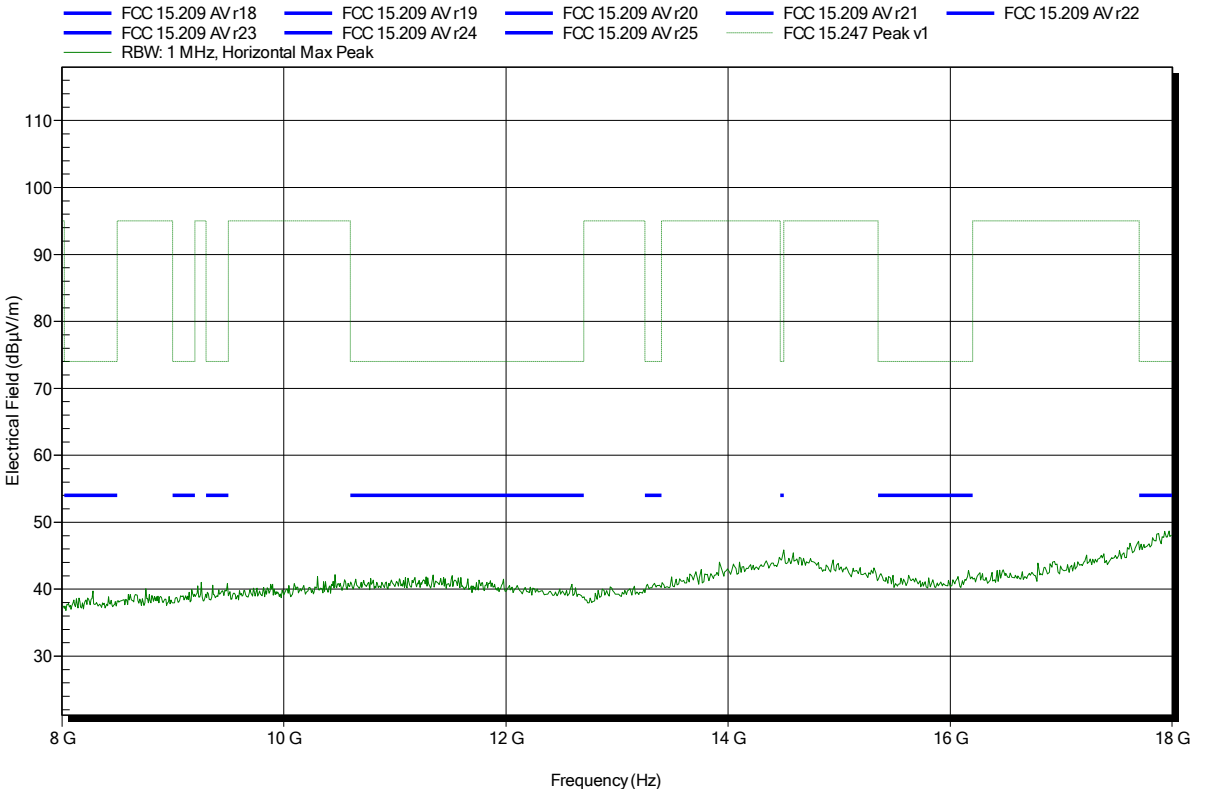
Frequency	Average	Average Limit	Average Difference	Average Status
4.809 GHz	38.23 dBµV/m	54 dBµV/m	-15.77 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

Applicant:	KONDO KAGAKU CO., LTD
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	

Index 43



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Project number: G0M-1405-3862

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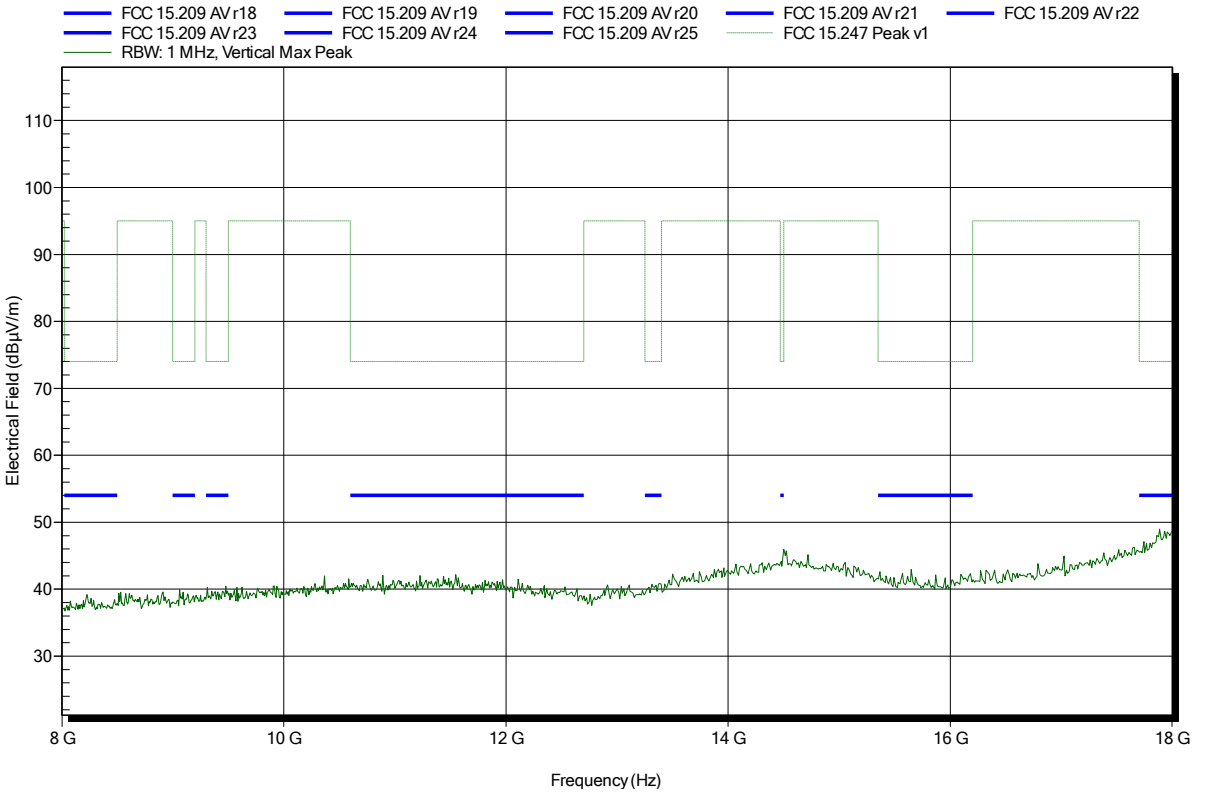
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	

Index 45



Spurious emissions according to FCC 15.247

Project number: G0M-1405-3862

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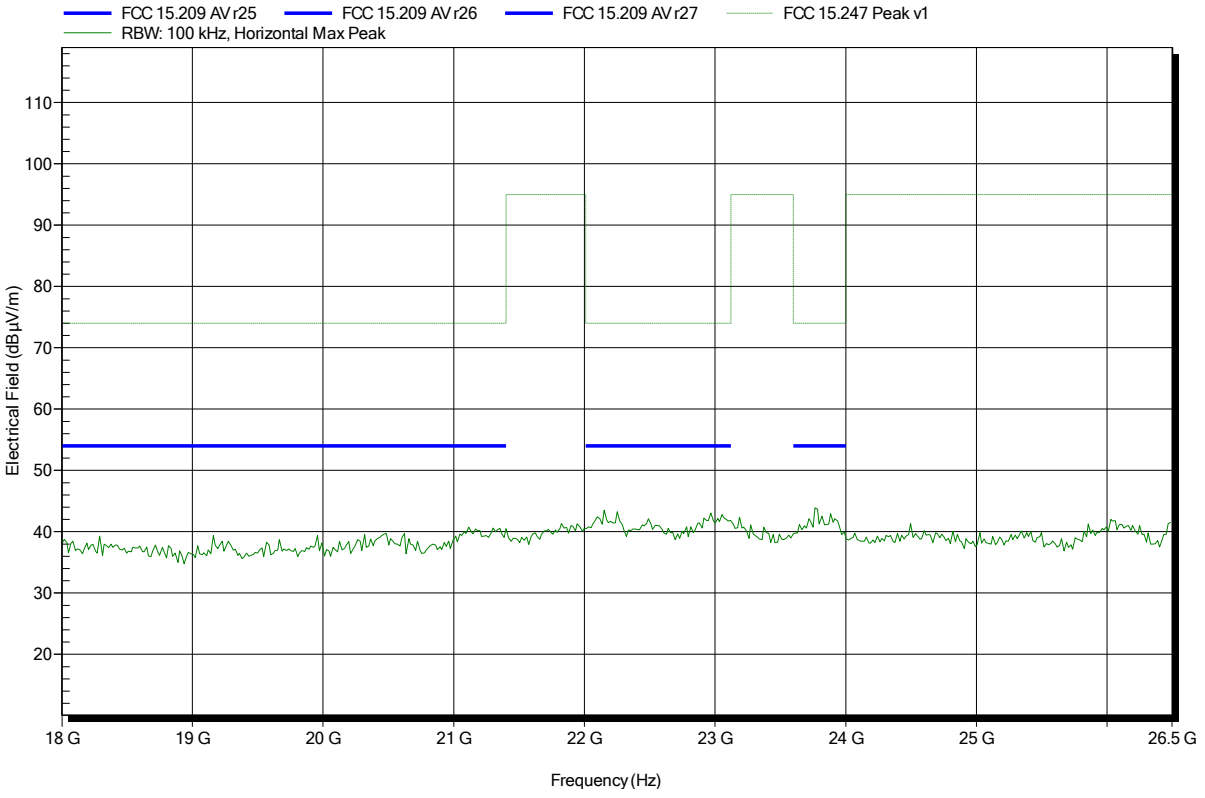
EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HL 025, Horizontal
Measurement distance:	1 m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	

Index 44



Spurious emissions according to FCC 15.247

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EUT Name:	Radio Control system for Model cars
Model:	Esprit4
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Handrik
Test Conditions:	Tnom: 25°C, Vnom: 6.0V DC (battery)
Antenna:	Rohde & Schwarz HL 025, Vertical
Measurement distance:	1 m
Mode:	TX; 2476 MHz
Test Date:	2014-09-19
Note:	

Index 46