

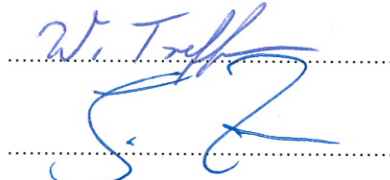
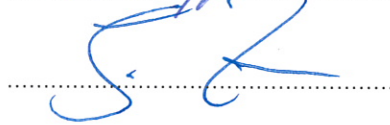


FCC TEST REPORT FCC 47 CFR Part 15C Industry Canada RSS-210 Frequency hopping systems operating within the 2400 – 2483.5MHz band	
Report Reference No.	G0M-1112-1639-TFC247B-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	<div style="display: flex; justify-content: center; align-items: center;">   </div> <p style="text-align: center; margin-top: 5px;"> A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC OATS Filing assigned code: 3470A </p>
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 transmitter for Model Cars
Model No.	EX-1
Hardware version	None
Firmware / Software version	None
	FCC-ID: QH9KTSS-703 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:	
Date of receipt of test item	2012-03-21
Date (s) of performance of tests	2012-03-21 - 2012-04-05
Compiled by	Christian Weber
Tested by (+ signature)	Wilfried Treffke
(Testing Manager)	
Approved by (+ signature)	Jens Zimmermann
(Test Lab Manager)	
Date of issue	2012-05-23
Total number of pages	99
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:	

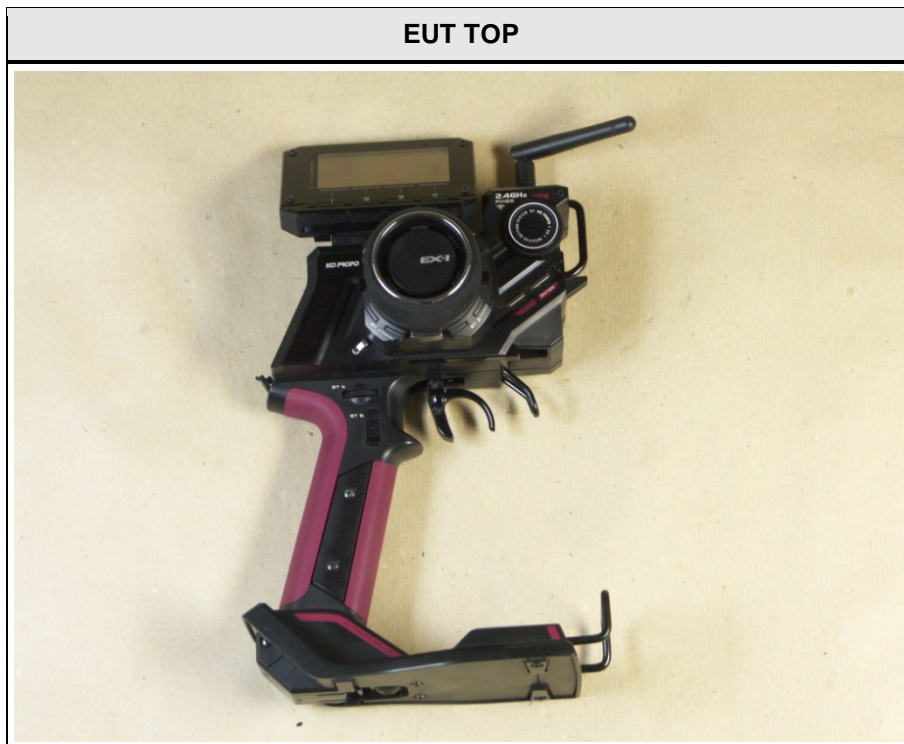
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1 Equipment (Test item) Description:

Description	Radio control transmitter for Model Cars	
Model	EX-1	
Serial number	None	
Hardware version	None	
Software / Firmware version	None	
FCC-ID	QH9KTSS-703	
IC	N/A	
Equipment type	End product	
Radio type	Transceiver	
Radio technology	Non specific frequency hopping system	
Operating frequency range	2404 - 2480MHz	
Assigned frequency band	2400 - 2483.5MHz	
Main test frequencies	F _{LOW}	2404MHz
	F _{MID}	2440MHz
	F _{HIGH}	2480MHz
Spreading	FHSS	
Modulations	Frequency	
Number of channels	29	
Channel spacing	2MHz	
Number of antennas	1	
Antenna	Type	external dedicated
	Model	Simple wire antenna (1/2 wave antenna)
	Manufacturer	unspecified
	Gain	1.9dBi
Manufacturer	Kondo Kagaku Co., Ltd. 4-17-7 Higashi Nippori, Arakawa-Ku Tokyo 116-0014 JAPAN	
Power supply	V _{NOM}	6.0VDC (Battery)
	V _{MIN}	N/A
	V _{MIN}	N/A
AC/DC-Adaptor	Model	N/A
	Vendor	N/A
	Input	N/A
	Output	N/A

1.1 Photos – Equipment External



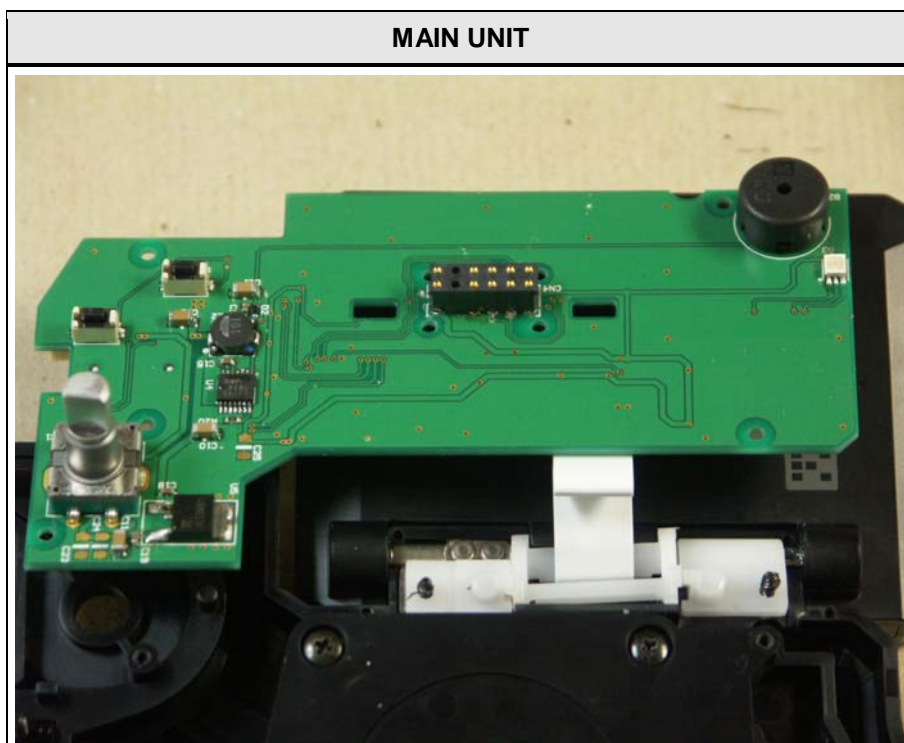
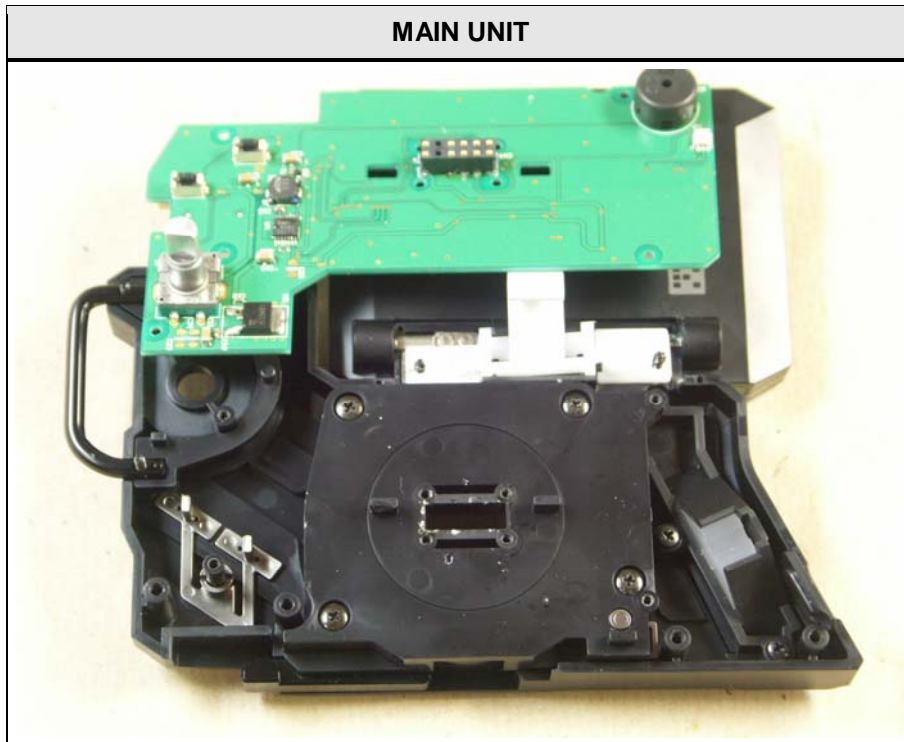
EUT BOTTOM

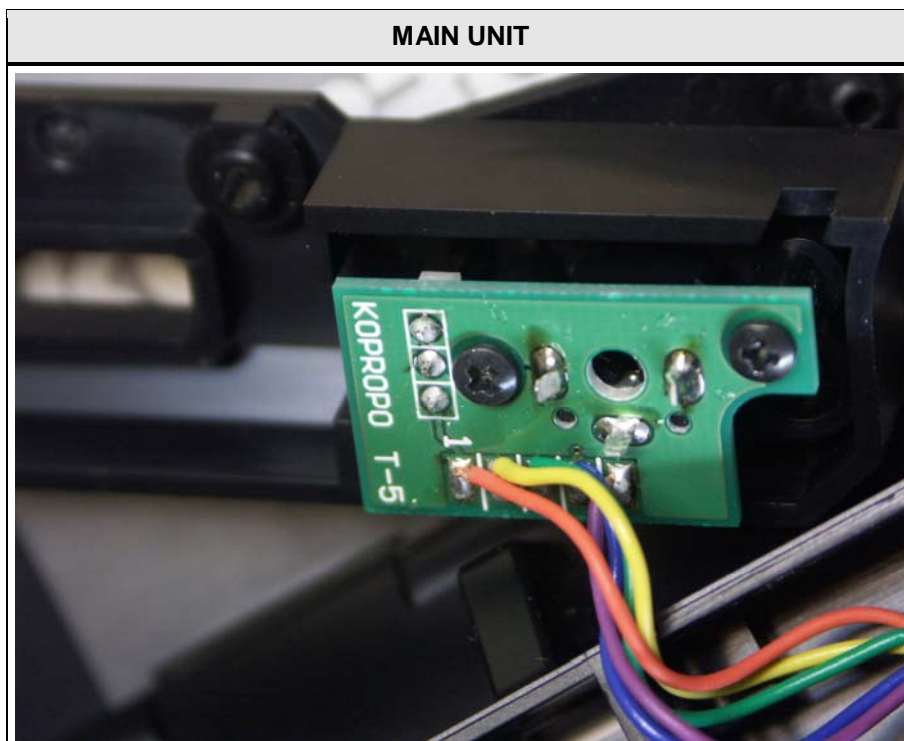
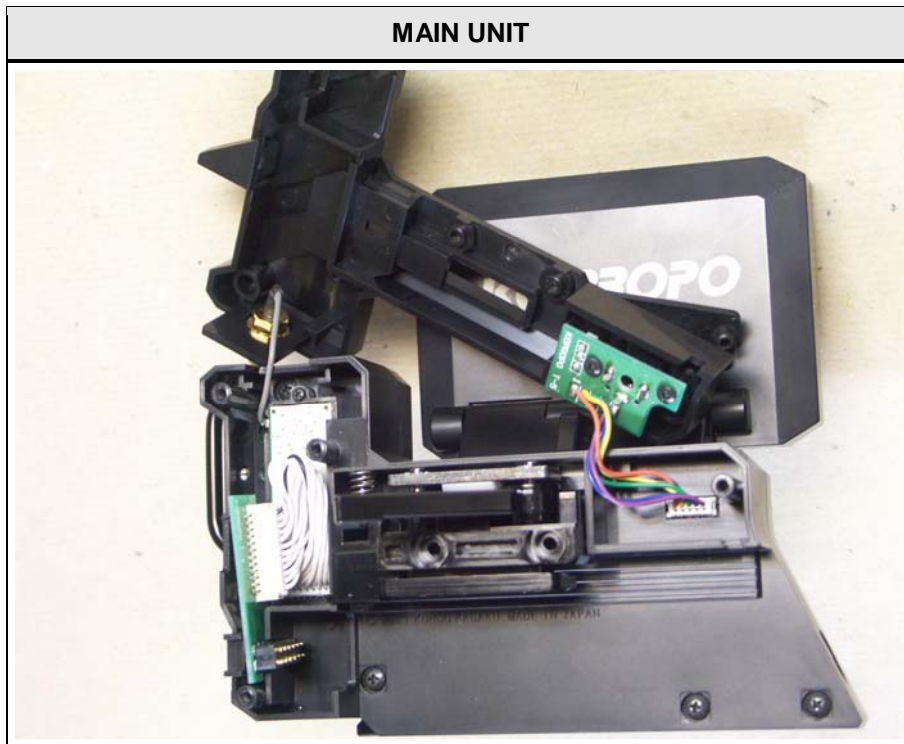


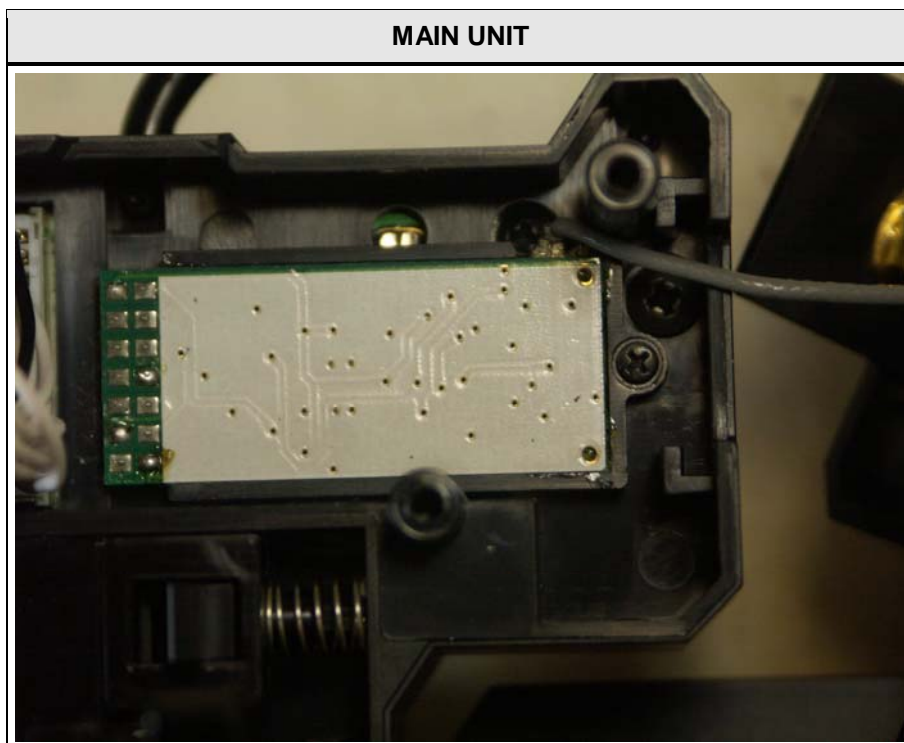
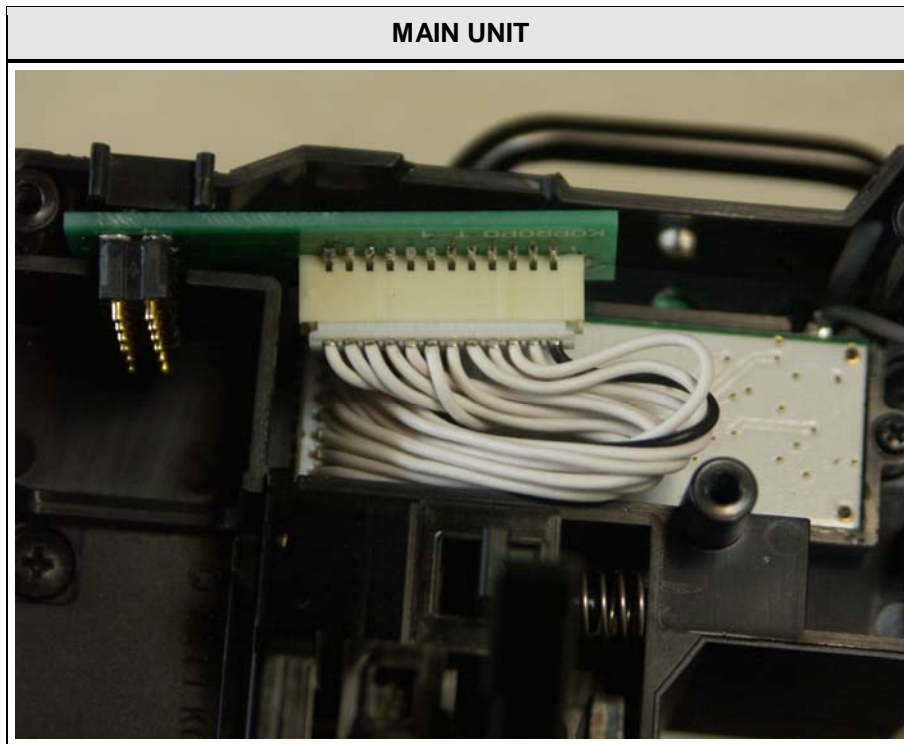
EUT ID

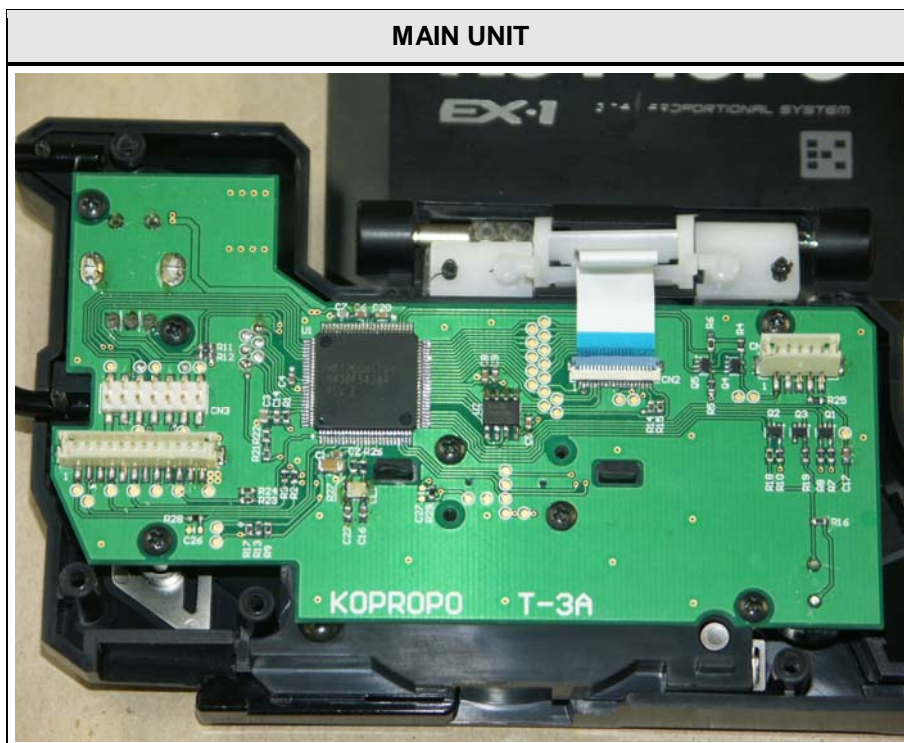
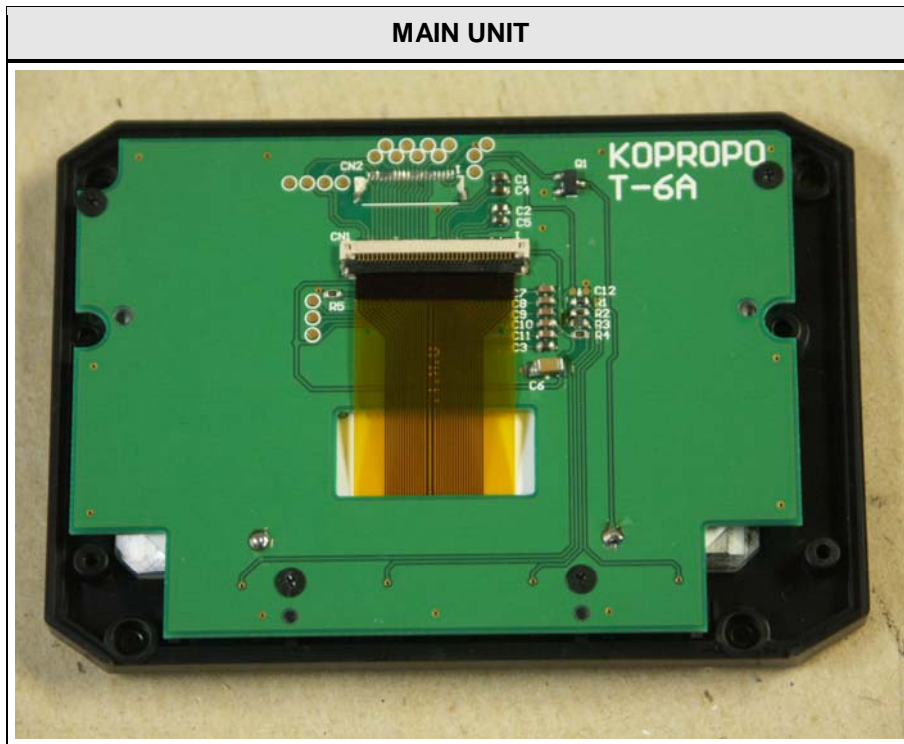


1.2 Photos – Equipment internal

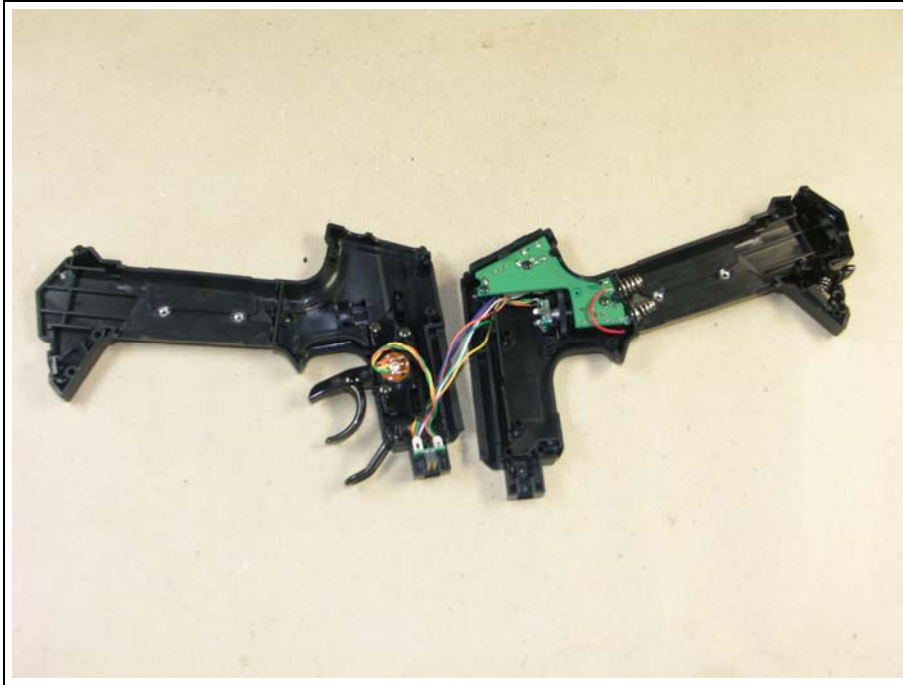




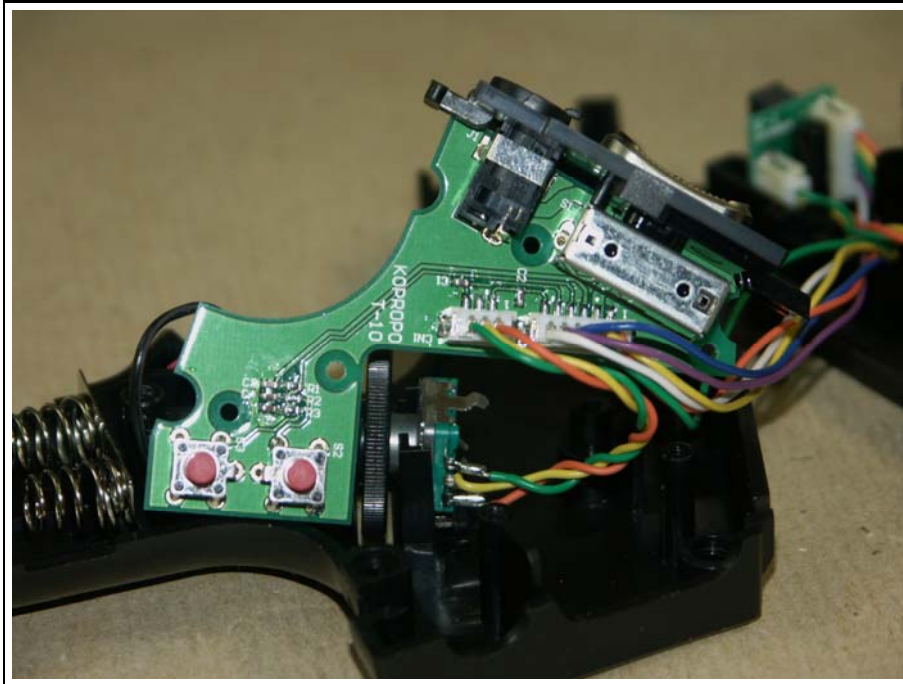




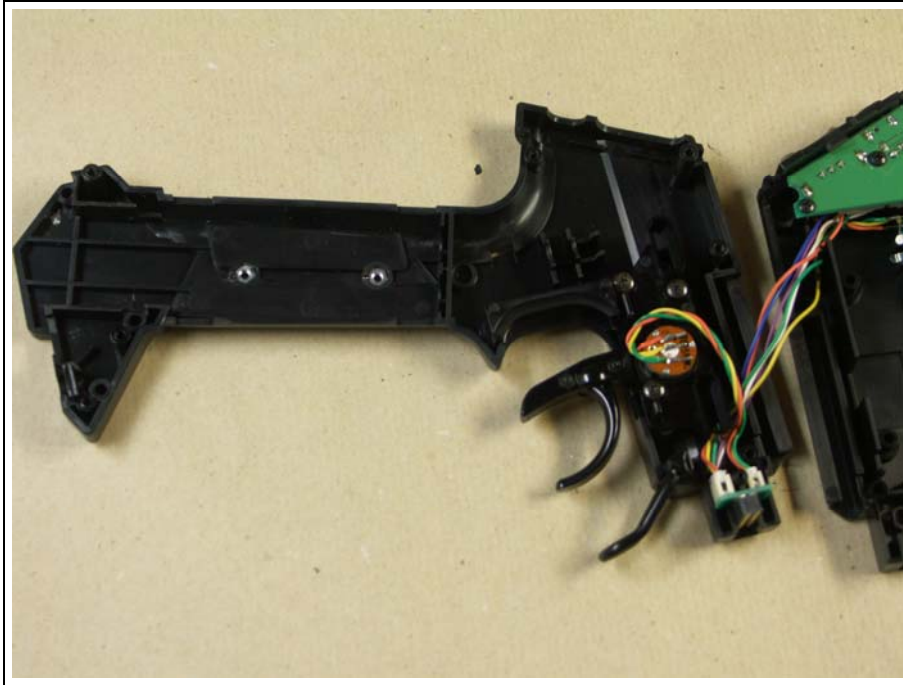
GRIP UNIT



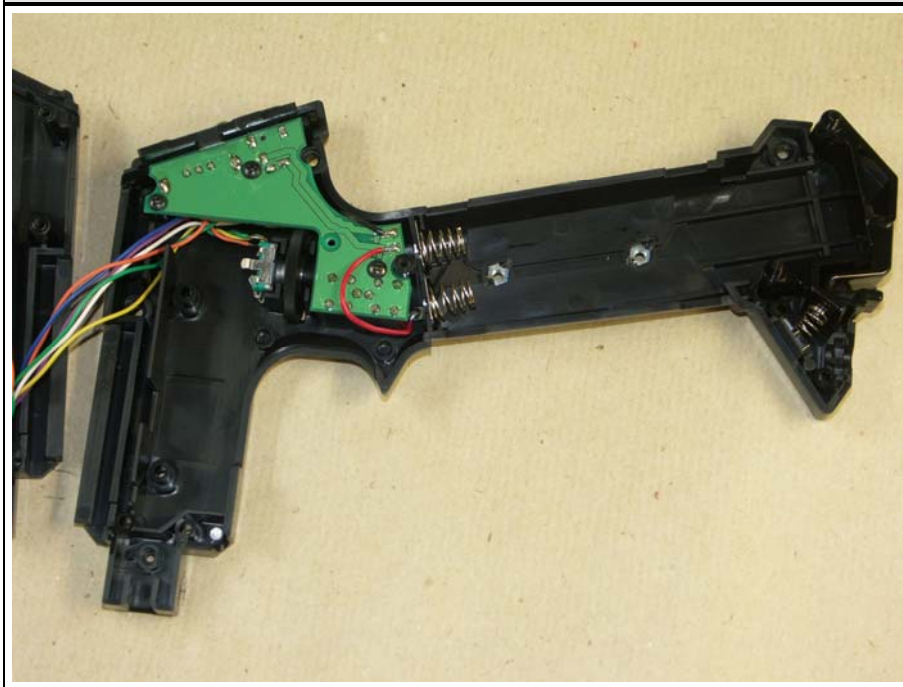
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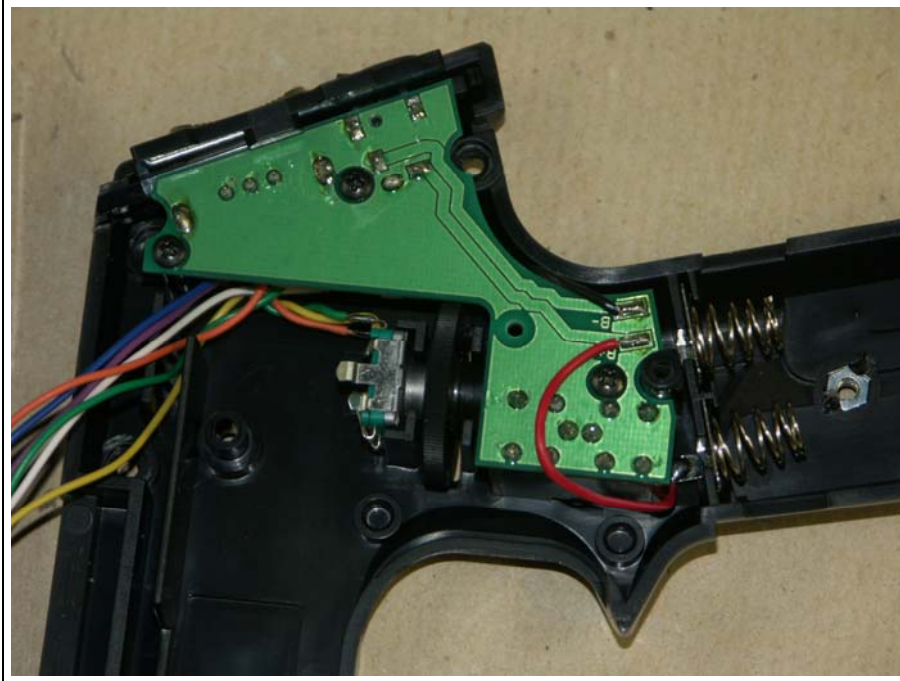
GRIP UNIT



GRIP UNIT

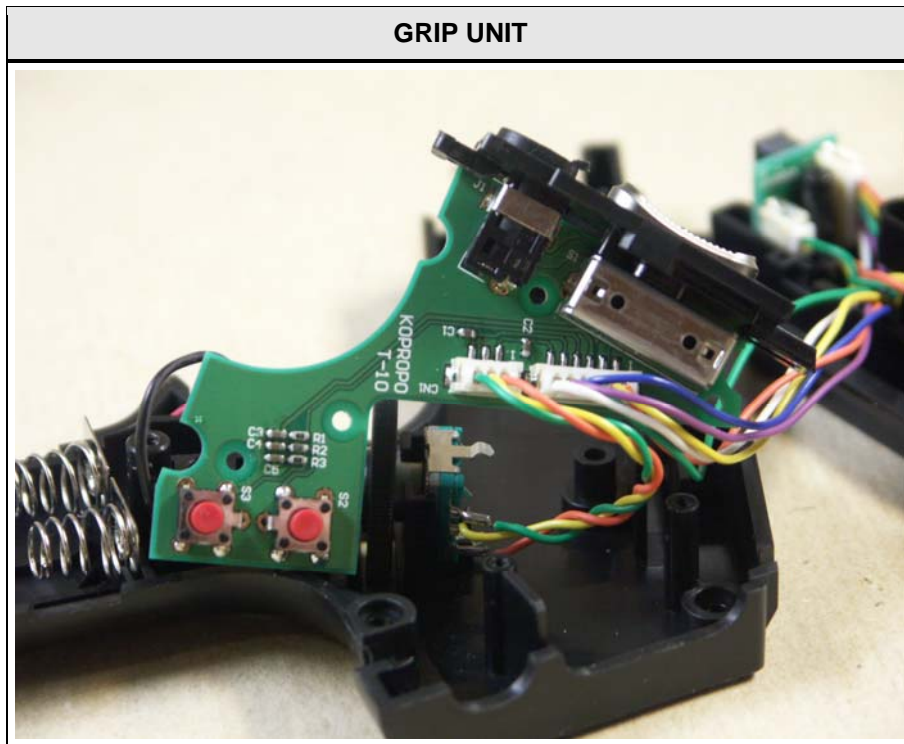


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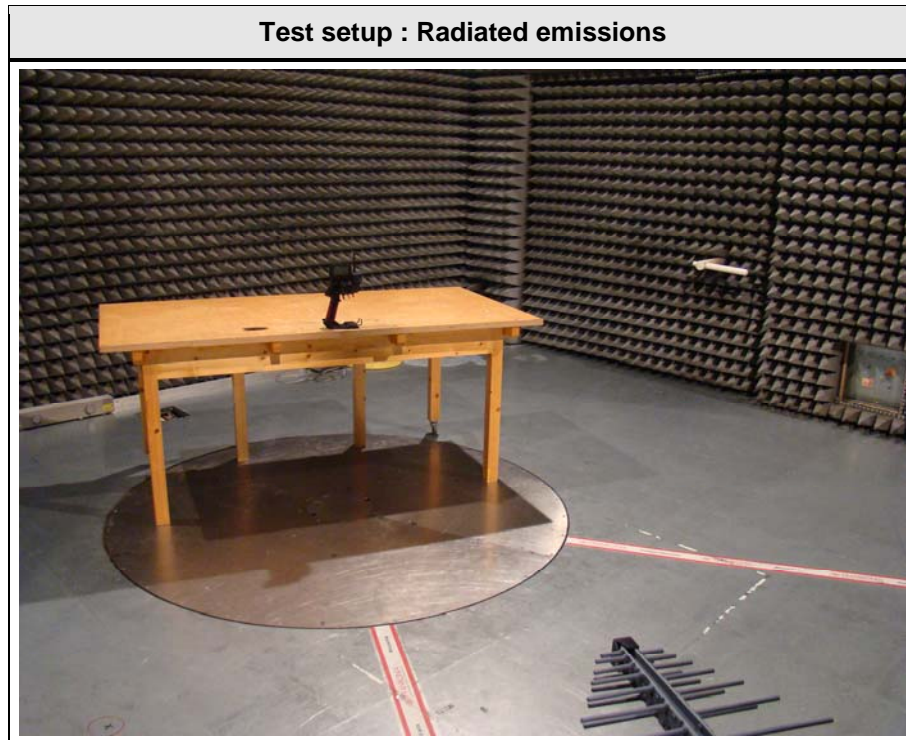


GRIP UNIT





1.3 Photos – Test setup



1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
None				
*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	
single	General conditions:	EUT powered by fully charged battery
	Radio conditions:	Mode = standalone transmit Spreading = Hopping stopped (single hopping channel) Modulation = Frequency Duty cycle = 100% Power level = Maximum
Hopping	General conditions:	EUT powered by fully charged battery
	Radio conditions:	Mode = standalone transmit Spreading = Hopping Modulation = Frequency Duty cycle = 6% Power level = Maximum
Receive	General conditions:	EUT powered by fully charged battery
	Radio conditions:	Mode = standalone receive Spreading = Hopping

1.6 Test Equipment Used During Testing

20dB Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	ETS 0496	2011-12	2012-12

Number of hopping frequencies					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	ETS 0496	2011-12	2012-12

Time of occupancy					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	ETS 0496	2011-12	2012-12

Maximum peak conducted power					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	ETS 0496	2011-12	2012-12

Band edge compliance					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	ETS 0496	2011-12	2012-12

Conducted spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	ETS 0496	2011-12	2012-12

Radiated spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 5	ETS 0583	-	-
Spectrum Analyzer	R&S	FSIQ26	ETS 0413	2011-04	2012-04
Biconical Antenna	R&S	HK 116	ETS 0012	2010-01	2013-01
LPD Antenna	R&S	HL 223	ETS 0295	2011-02	2014-02
LPD Antenna	R&S	HL 025	ETS 0512	2010-02	2013-02

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 dB μ V. 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:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

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

Limit:

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

$$\text{Limit (dB}\mu\text{V/m)} = 20 * \log (\mu\text{V/m})$$

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:


$$\begin{array}{rclclcl} \text{Reading} & + & \text{AF} & = & \text{Net Reading} & : & \text{Net reading - FCC limit} & = & \text{Margin} \\ 21.5 \text{ dB}\mu\text{V} & + & 26 \text{ dB} & = & 47.5 \text{ dB}\mu\text{V/m} & : & 47.5 \text{ dB}\mu\text{V/m} - 57.0 \text{ dB}\mu\text{V/m} & = & -9.5 \text{ dB} \end{array}$$

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	20dB 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	EUT battery powered
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

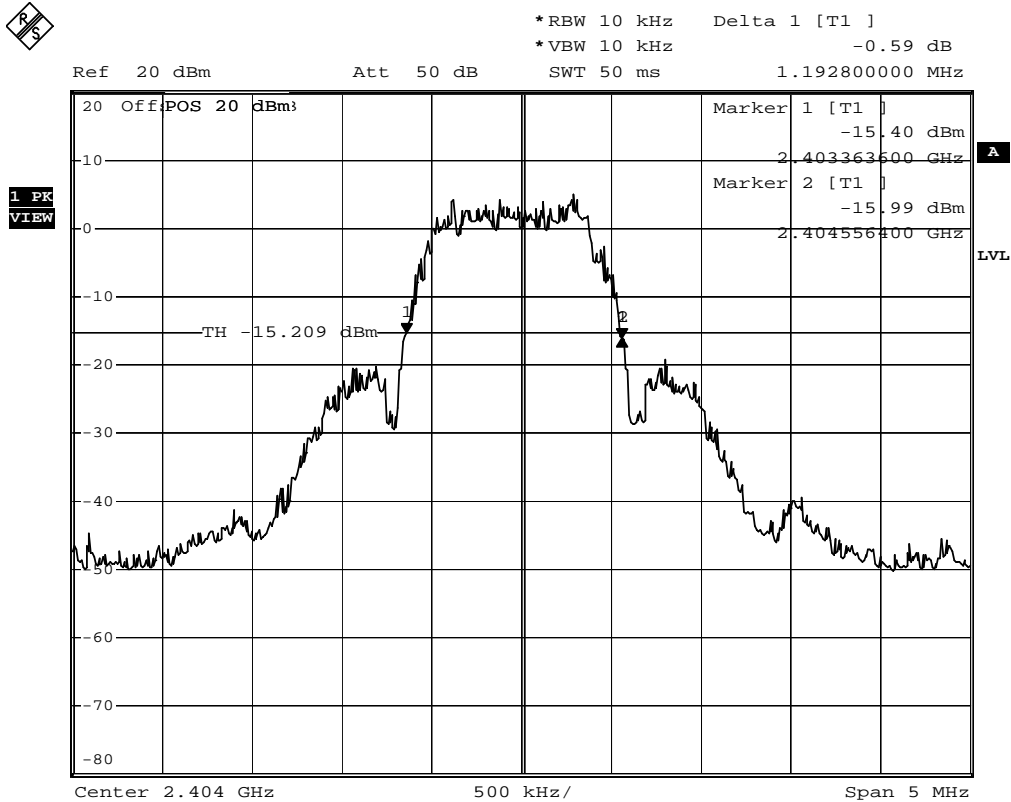
Occupied Bandwidth acc. IC RSS-Gen		Verdict: PASS	
Test according to measurement reference	Reference Method		
	RSS-Gen 4.6.1		
Test frequency range	Tested frequencies		
	$F_{LOW} / F_{MID} / F_{HIGH}$		
Limits			
None (Informational only)			
Test setup			
 <pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] </pre>			
Test procedure			
<ol style="list-style-type: none"> 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 [MHz]
F_{LOW}	2404	Single	1.090
F_{MID}	2440	Single	1.100
F_{HIGH}	2480	Single	1.110
Comments:			

3.2 Test Conditions and Results – 20dB Bandwidth

20dB 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 \leq 125mW / 21dBm		
1.0 · Carrier spacing			125mW / 21dBm < Output power \leq 1W / 30dBm		
Test setup					
					
Test procedure					
<ol style="list-style-type: none"> 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 -20dB to the left of the peak 6. Marker on envelope of spectrum is set to level of -20dB to the right of the peak 7. 20dB Bandwidth is determined by marker frequency separation 					
Test results					
Channel	Frequency [MHz]	Mode	20dB Bandwidth [MHz]	Limit [MHz]	Result
F_{LOW}	2404	Single	1.192	3.0	PASS
F_{MID}	2440	Single	1.222	3.0	PASS
F_{HIGH}	2480	Single	1.193	3.0	PASS
Comments:					

20dB Bandwidth – Single F_{Low}
FCC part 15.247
20 dB bandwidth

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 2404 MHz
Comment 3	pass



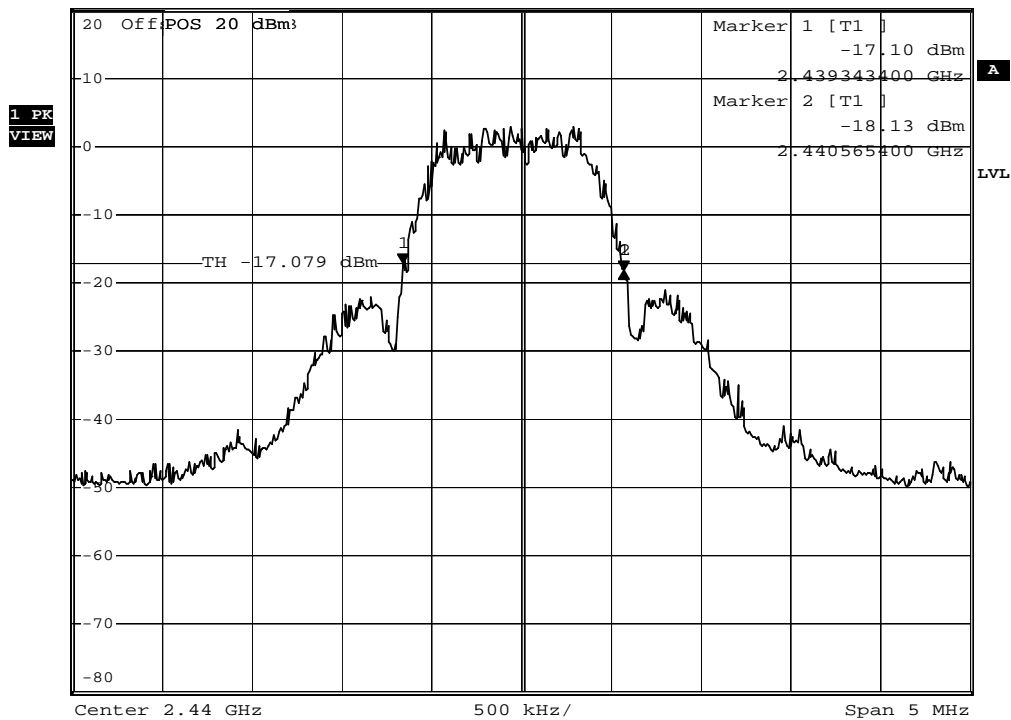
Comment: 20 dB bandwidth: 1192.8 KHz
 Date: 5.APR.2012 12:50:14

20dB Bandwidth – Single F_{MID}
FCC part 15.247
20 dB bandwidth

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 2440 MHz
Comment 3	pass



*RBW 10 kHz Delta 1 [T1]
 *VBW 10 kHz -1.03 dB
 Ref 20 dBm Att 50 dB SWT 50 ms 1.222000000 MHz



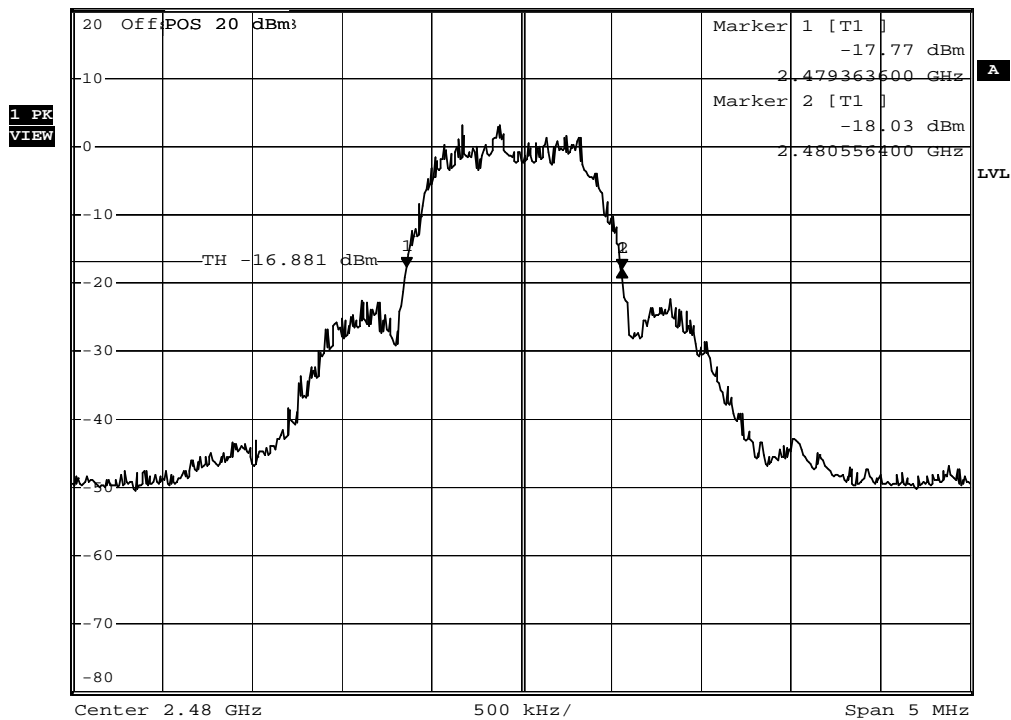
Comment: 20 dB bandwidth: 1222 KHz
 Date: 5.APR.2012 12:55:01

20dB Bandwidth – Single F_{HIGH}
FCC part 15.247
20 dB bandwidth

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 2480 MHz
Comment 3	pass

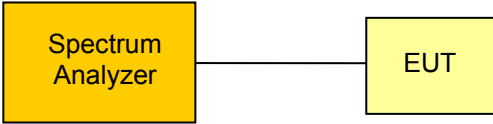


*RBW 10 kHz Delta 1 [T1]
 *VBW 10 kHz -0.25 dB
 Ref 20 dBm Att 50 dB SWT 50 ms 1.192800000 MHz



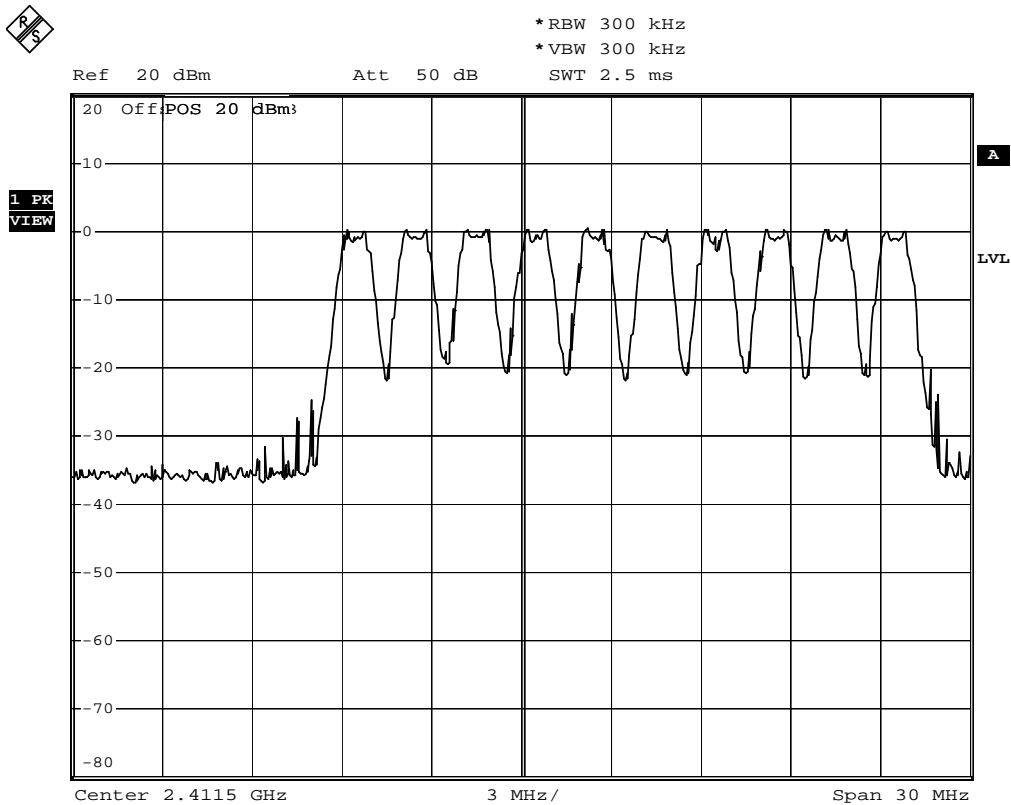
Comment: 20 dB bandwidth: 1192.8 KHz
 Date: 5.APR.2012 12:57:02

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 $\leq 125\text{mW} / 21\text{dBm}$	
Number of hopping channels ≥ 75	$125\text{mW} / 21\text{dBm} < \text{Output power} \leq 1\text{W} / 30\text{dBm}$	
Test setup		
 <pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] </pre>		
Test procedure		
<ol style="list-style-type: none"> 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
39	≥ 15	PASS
Comments:		

Number of hopping frequencies - Range A
FCC part 15.247
Number of hopping frequencies

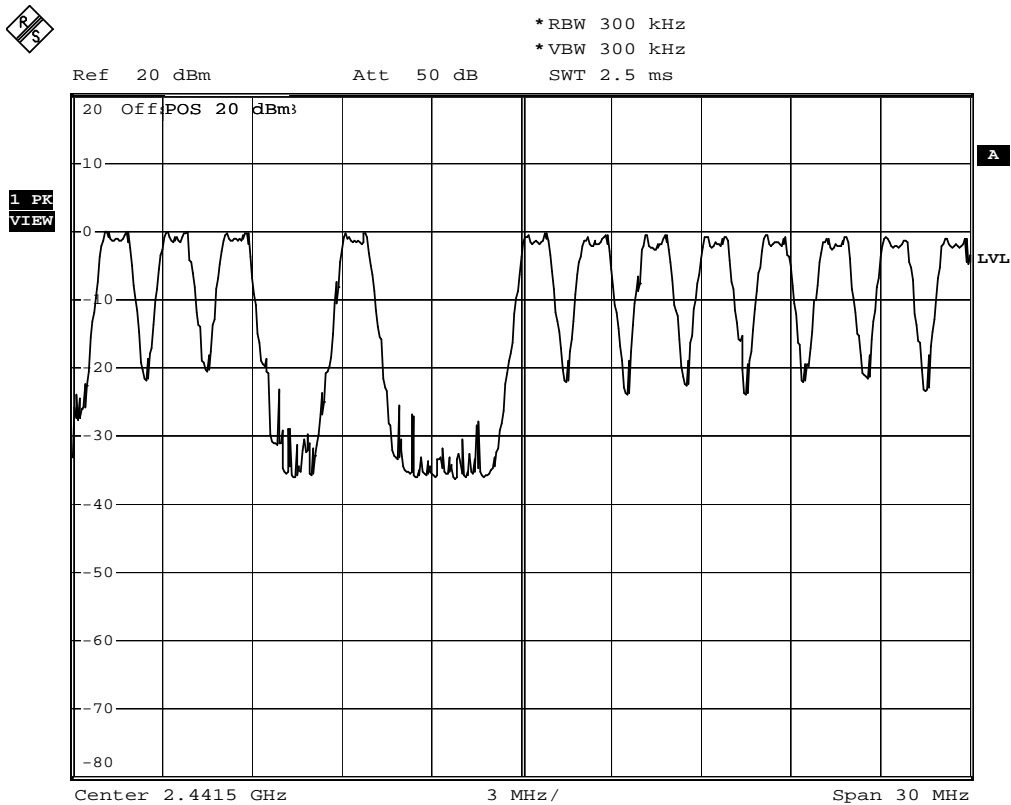
EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Number of hopping frequencies
Comment 2	Channel.: 1-10
Comment 3	pass



Comment: Number of hopping frequencies
 Date: 5.APR.2012 14:08:49

Number of hopping frequencies - Range B
FCC part 15.247
Number of hopping frequencies

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Number of hopping frequencies
Comment 2	Channel.: 11-22
Comment 3	pass



Comment: Number of hopping frequencies
 Date: 5.APR.2012 14:10:22

Number of hopping frequencies - Range C

FCC part 15.247

Number of hopping frequencies

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Number of hopping frequencies
Comment 2	Channel.: 23-29
Comment 3	pass

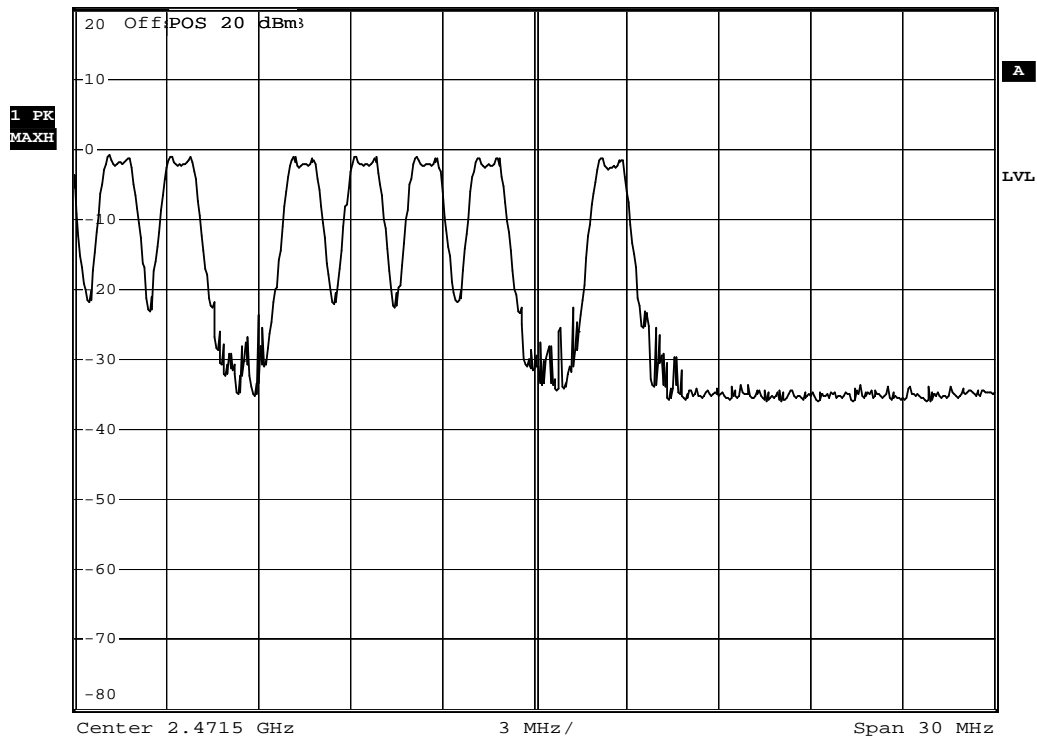


* RBW 300 kHz
 * VBW 300 kHz
 SWT 2.5 ms

Ref 20 dBm

Att 50 dB

SWT 2.5 ms

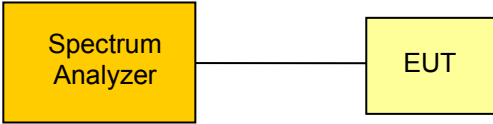


Date: 5.APR.2012 14:13:10

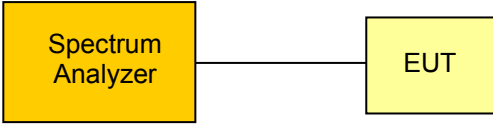
Test Report No.: G0M-1112-1639-TFC247B-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.4 Test Conditions and Results – Frequency hopping channel separation

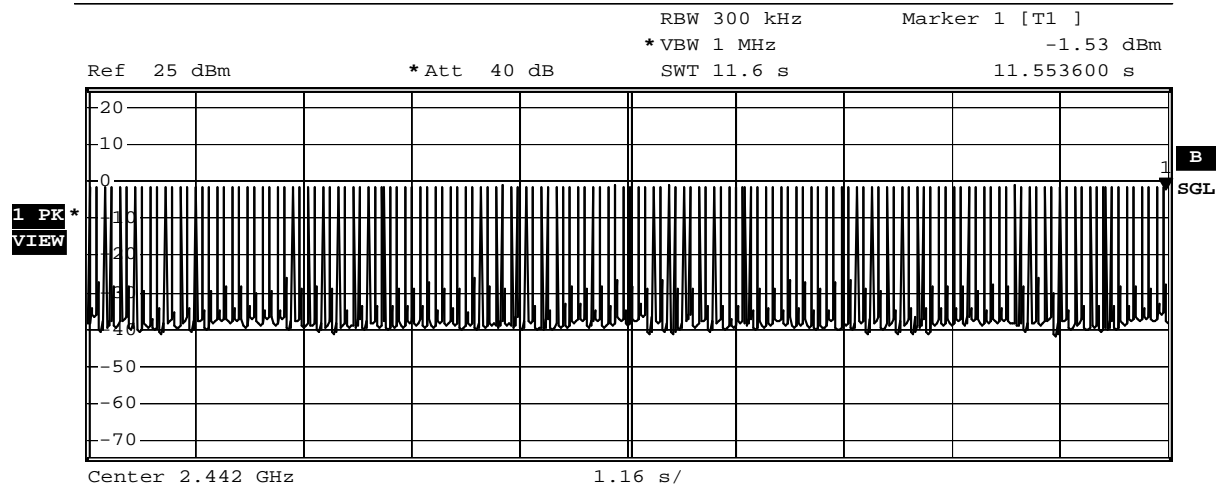
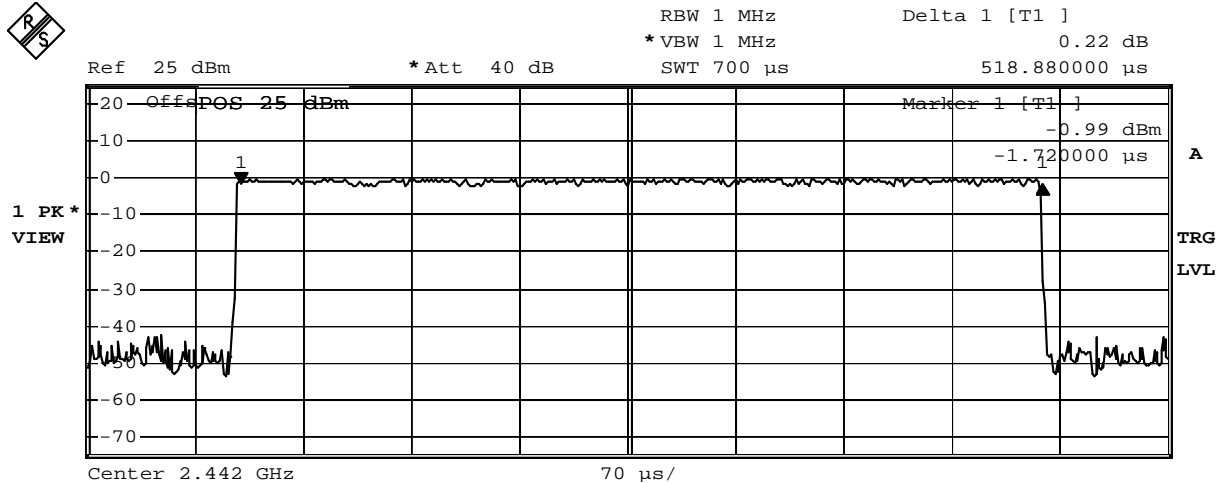
Frequency hopping channel separation acc. FCC 15.247 / IC RSS-210		Verdict: PASS
EUT requirement rule parts and clause	Reference	
	FCC 15.247(a)(1) / IC RSS-210 A8.1	
Test according to measurement reference	Reference Method	
	FCC Public Notice DA 00-705	
Test frequency range	Tested frequencies	
	2442 & 2444MHz	
EUT test mode	Hopping	
Limits		
Limit	Condition	
$\geq 25\text{kHz}$ or $\frac{2}{3}$ of 20dB bandwidth	Output power $\leq 125\text{mW}$ / 21dBm	
$\geq 25\text{kHz}$ or 20dB bandwidth	125mW / 21dBm < Output power $\leq 1\text{W}$ / 30dBm	
Test setup		
 <pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] </pre>		
Test procedure		
<ol style="list-style-type: none"> 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
2000	$\geq \frac{2}{3} \cdot 1192 = 794.67$	PASS
Comments:		

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				
	2442MHz				
EUT test mode	Hopping				
Limits					
Limit					
Time of occupancy $\leq 0.4s$ within $0.4s \cdot$ Number of hopping channels					
Test setup					
 <pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] </pre>					
Test procedure					
<ol style="list-style-type: none"> 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	144	0.000519	0.075	≤ 0.4	PASS
Comments:					

Time of occupancy
FCC part 15.247
Time of occupancy (dwell time)


EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Time of occupancy
Comment 2	Channel.: 2442 MHz (Hopping mode)
Comment 3	144 events * 0.519 ms result: 75 ms




Comment: Burst length=0.51888 ms

Date: 5.APR.2012 14:28:09

3.6 Test Conditions and Results – Maximum peak conducted power

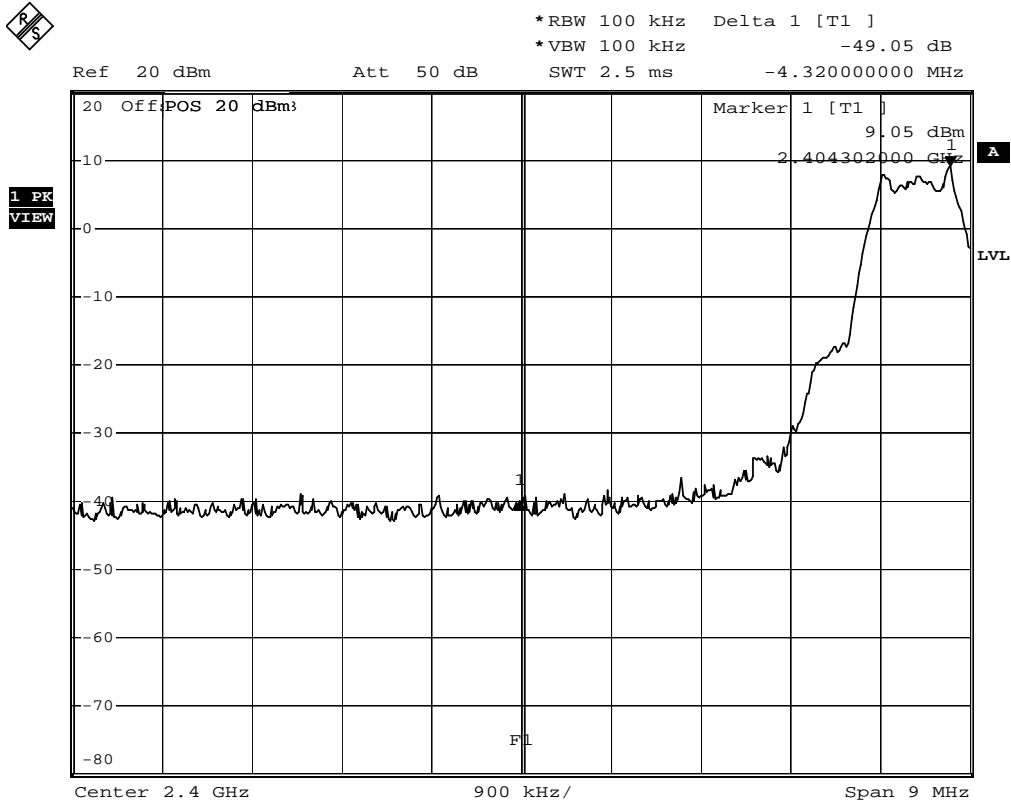
Maximum peak conducted power acc. FCC 15.247 / IC RSS-210						Verdict: PASS		
EUT requirement rule parts and clause			Reference					
			FCC 15.247(b)(1) / IC RSS-210 A8.4					
Test according to measurement reference			Reference Method					
			FCC Public Notice DA 00-705					
Test frequency range			Tested frequencies					
			$F_{LOW} / F_{MID} / F_{HIGH}$					
Measurement mode			Peak					
Maximum antenna gain			1.9dBi \Rightarrow Limit correction = 0dB					
Limits								
Limit				Condition				
1W (30dBm)				Number of hopping channels \geq 75				
0.125W (21dBm)				75 > Number of hopping channels \geq 15				
The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6dBi. If transmitting antennas of directional gain greater than 6dBi 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 6dBi.								
Test setup								
								
Test procedure								
<ol style="list-style-type: none"> 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 20dB bandwidth and detector to peak and max hold 4. Resolution bandwidth is set to 3MHz 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	6.0VDC	Single	9.4	0.0087	21	-11.60	PASS
F_{MID}	2440	6.0VDC	Single	7.6	0.0058	21	-13.40	PASS
F_{HIGH}	2480	6.0VDC	Single	6.1	0.0041	21	-14.90	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			
$\leq -20\text{dB}/100\text{kHz}$			Peak power measurement detector = Peak			
$\leq -30\text{dB}/100\text{kHz}$			Peak power measurement detector = RMS			
Test setup						
 <pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] </pre>						
Test procedure						
<ol style="list-style-type: none"> EUT set to test mode (Communication tester is used if needed) Span set around lower band edge and detector is set to peak and max hold Resolution bandwidth is set to 100kHz Markers are set to peak emission levels within frequency band and outside frequency band 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	-49.05	-20	-29.05	PASS
F_{HIGH}	2480	Single	-45.15	-20	-25.15	PASS
F_{LOW}	2404	Hopping	-37.13	-20	-17.13	PASS
F_{HIGH}	2480	Hopping	-36.60	-20	-16.60	PASS
Comments:						

Band-edge compliance – Single F_{LOW}
FCC part 15.247
Band-edge compliance of RF conducted emissions

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 2404 MHz
Comment 3	Single frequency mode



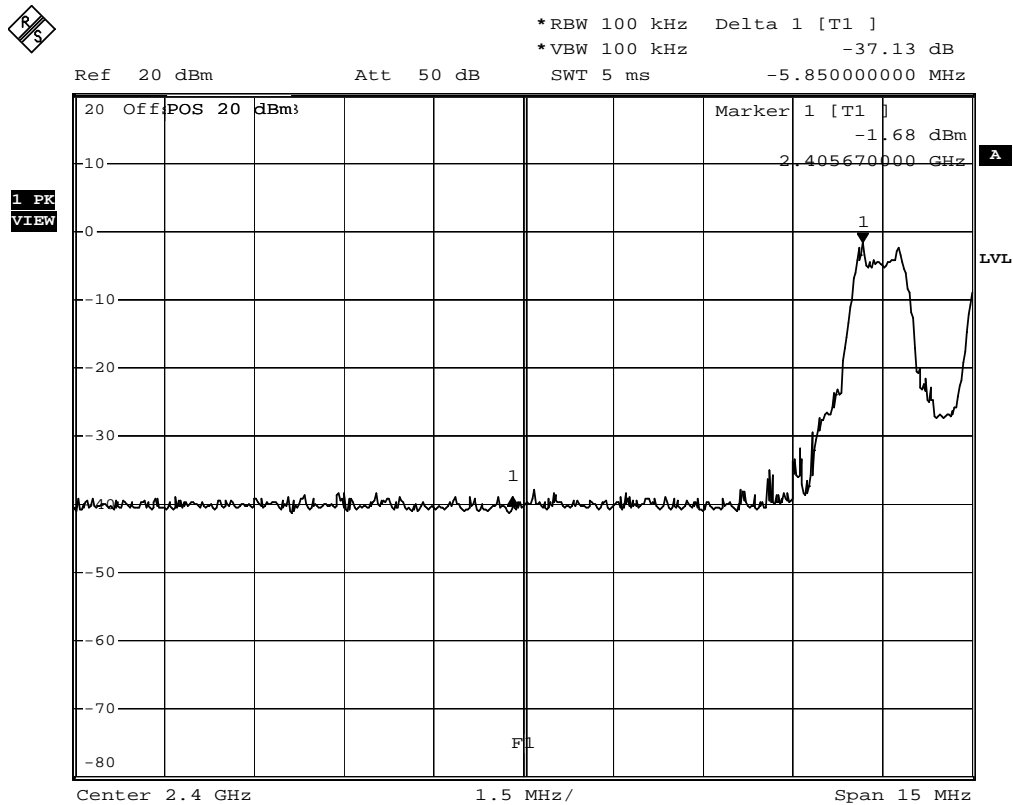
Comment: Limit: Marker Delta value >20 dB; Result: PASS
 Date: 5.APR.2012 13:04:01

Band-edge compliance – Hopping F_{LOW}

FCC part 15.247

Band-edge compliance of RF conducted emissions

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 2404 MHz
Comment 3	Hopping mode



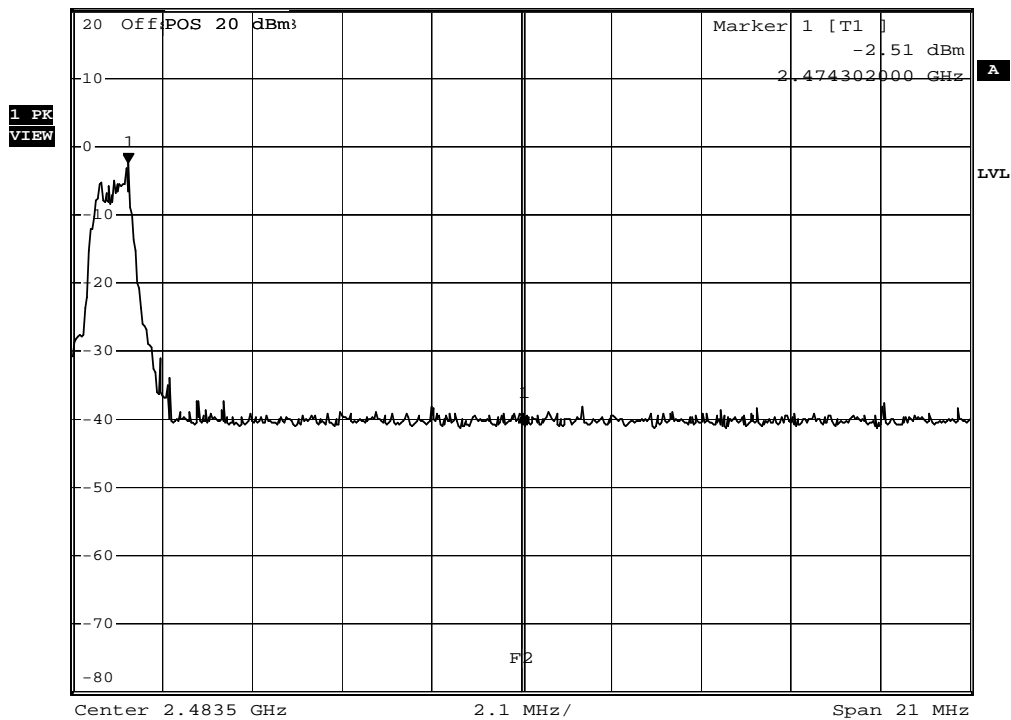
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 5.APR.2012 13:49:32

Band-edge compliance – Hopping F_{HIGH}
FCC part 15.247
Band-edge compliance of RF conducted emissions

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 2480 MHz
Comment 3	Hopping mode

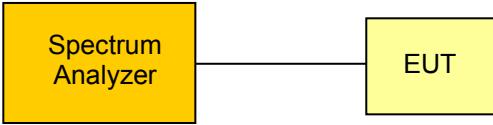


*RBW 100 kHz Delta 1 [T1]
 *VBW 100 kHz -36.60 dB
 Ref 20 dBm Att 50 dB SWT 5 ms 9.24000000 MHz



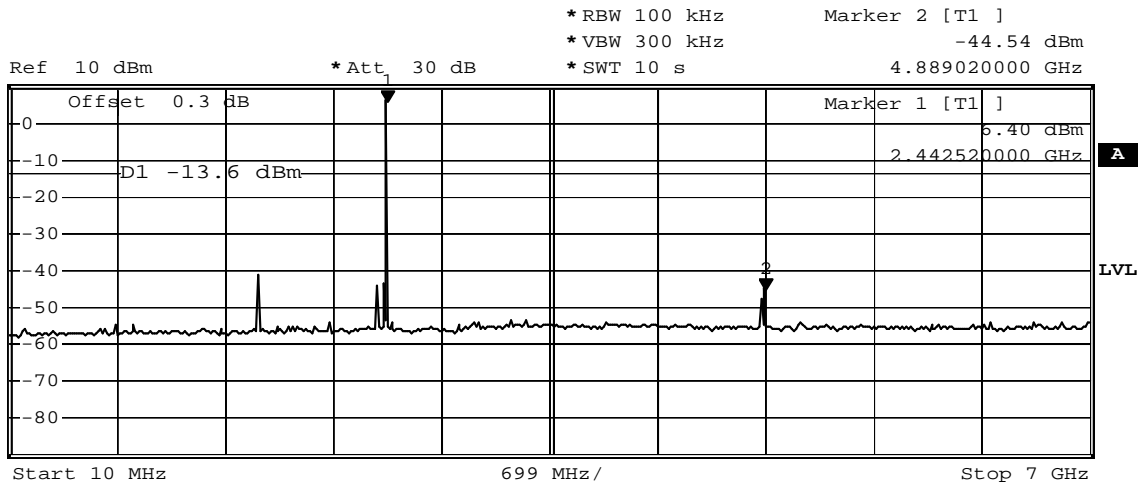
Comment: Limit: Marker Delta value >20 dB; Result: PASS
 Date: 5.APR.2012 13:57:40

3.8 Test Conditions and Results – Conducted spurious emissions

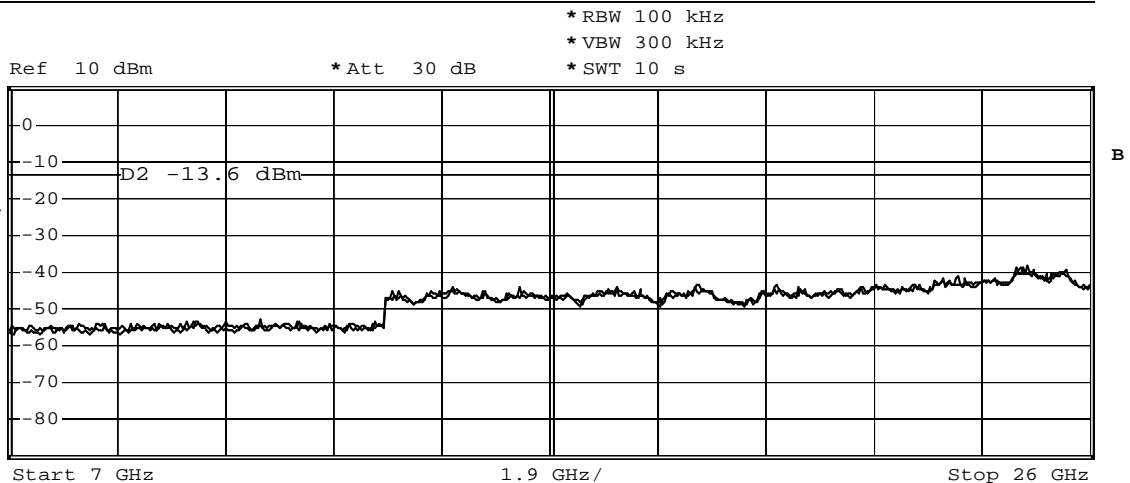
Conducted spurious emissions acc. FCC 15.247 / IC RSS-210						Verdict: PASS		
EUT requirement rule parts and clause		Reference						
		FCC 15.247(d) / IC RSS-210 A8.5						
Test according to measurement reference		Reference Method						
		FCC Public Notice DA 00-705						
Test frequency range		Tested frequencies						
		10MHz – 10 th Harmonic						
Measurement mode		Peak						
Limits								
Limit				Condition				
≤ -20dB/100kHz				Peak power measurement detector = Peak				
≤ -30dB/100kHz				Peak power measurement detector = RMS				
Test setup								
								
Test procedure								
<ol style="list-style-type: none"> 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 100kHz 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	4805	-42.00	8.83	-11.17	-30.83	PASS
F _{MID}	2440	Single	4889	-44.54	6.40	-13.60	-30.94	PASS
F _{HIGH}	2480	Single	1646	-39.44	4.55	-15.45	-23.99	PASS
Comments:								

Conducted spurious emissions – Single F_{MID}
**FCC part 15.247 (d)
Spurious Emissions**

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2440 MHz
Comment 3	pass



1 PK *
CLRWR
2 PK
VIEW

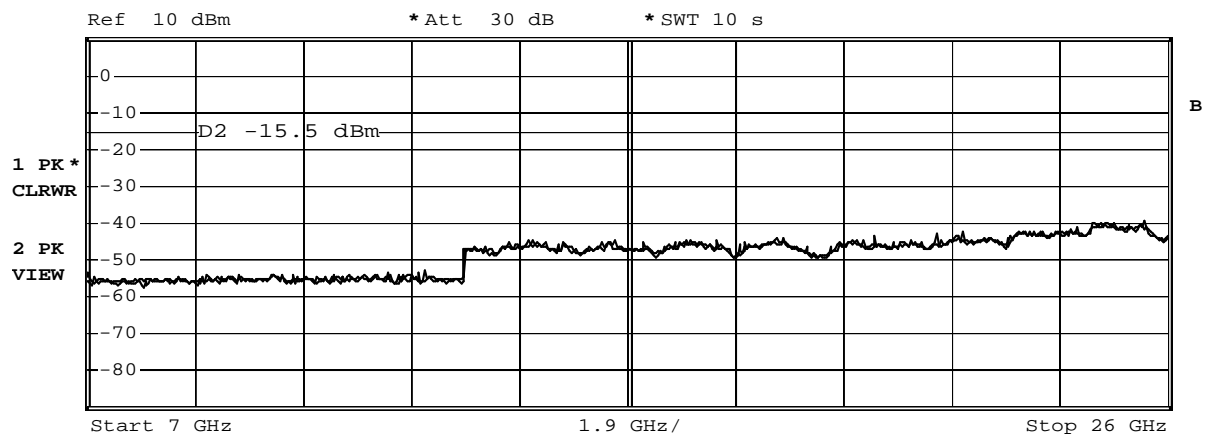
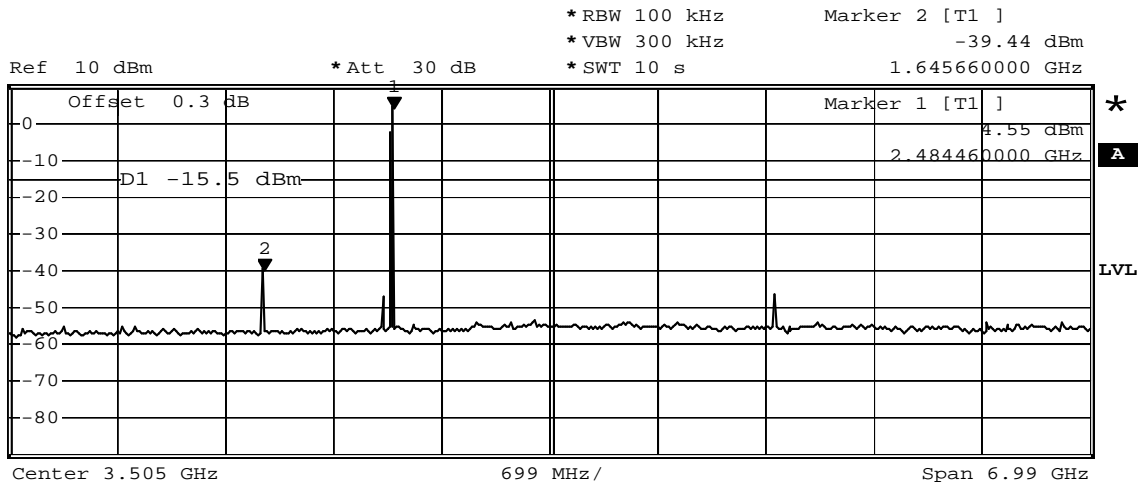


Date: 5.APR.2012 13:33:51

Conducted spurious emissions – Single F_{HIGH}

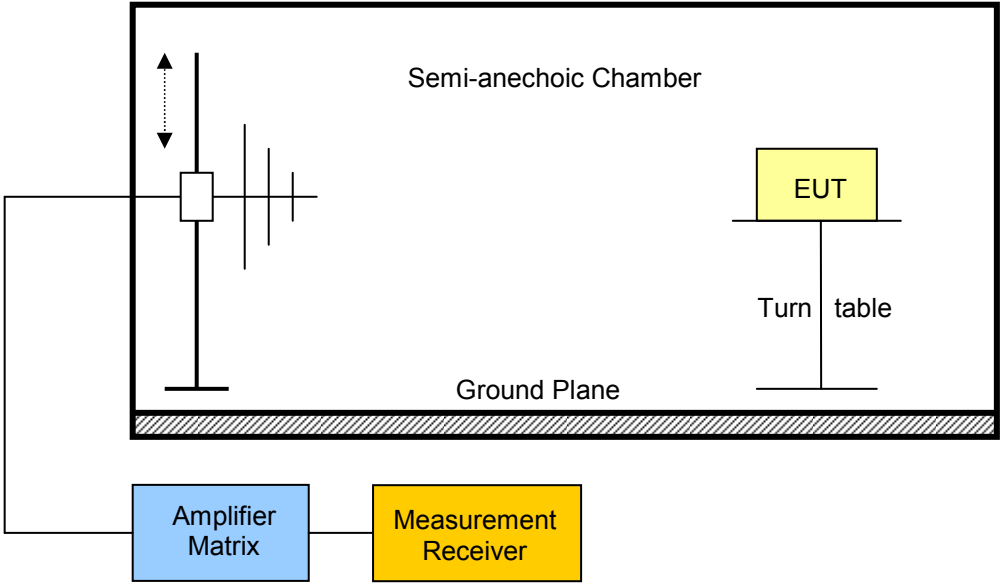
FCC part 15.247 (d)
Spurious Emissions

EUT	Radio control transmitter for Model Cars
Model	EX-1
Approval Holder	KONDO KAGAKU CO., LTD. / G0M-1112-1639
Temperature / Voltage	Tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2480 MHz
Comment 3	pass



Date: 5.APR.2012 13:37:35

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				
	30MHz – 10 th Harmonic				
Limits					
Frequency range [MHz]	Detector	Limit [μ V/m]	Limit [dB μ V/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 1GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1MHz with peak/average detector is used above 1GHz
4. Markers are set to peak emission levels within restricted bands

Test results – Internal Antenna

Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [db μ V/m]	Det.	Pol.	Limit [db μ V/m]	Limit dist. [m]*	Margin [dB]
F _{LOW}	2404	Single	4802	56.16	pk	ver	74	3	-17.84
F _{LOW}	2404	Single	4802	52.25	av	ver	54	3	-1.75
F _{LOW}	2404	Single	4802	56.99	pk	hor	74	3	-17.01
F _{LOW}	2404	Single	4802	53.14	av	hor	54	3	-0.86
F _{MID}	2440	Single	4882	56.69	pk	ver	74	3	-17.31
F _{MID}	2440	Single	4880	53.00	av	ver	54	3	-1.00
F _{MID}	2440	Single	4882	54.95	pk	hor	74	3	-19.05
F _{MID}	2440	Single	4880	50.93	av	hor	54	3	-3.07
F _{HIGH}	2480	Single	2483.5	59.2	pk	ver	74	3	-14.80
F _{HIGH}	2480	Single	2484	50.9	av	ver	54	3	-3.10
F _{HIGH}	2480	Single	4962	55.6	pk	ver	74	3	-18.40
F _{HIGH}	2480	Single	4961	52.5	av	ver	54	3	-1.50

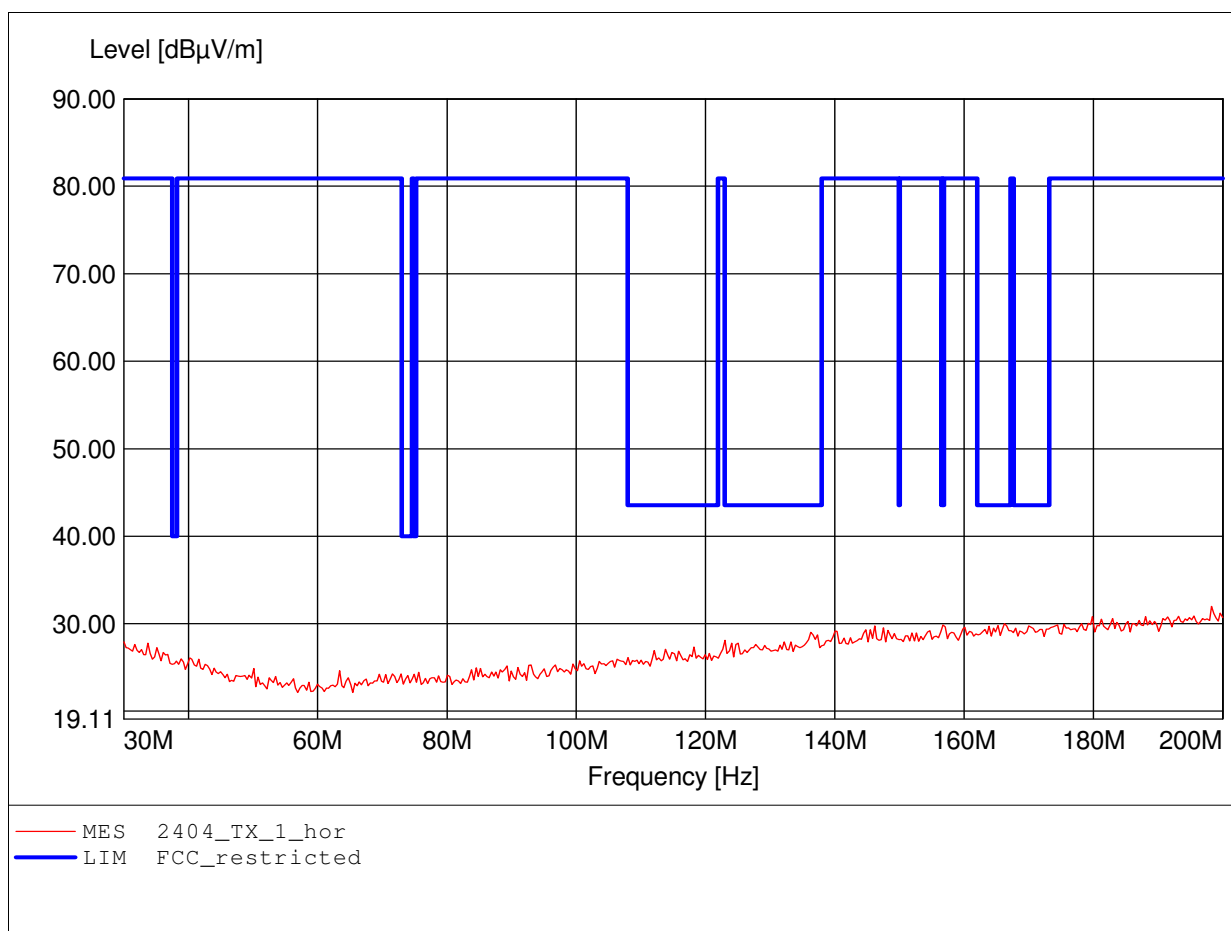
Comments: * Physical distance between EUT and measurement antenna.

ANNEX A Transmitter radiated spurious emissions

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

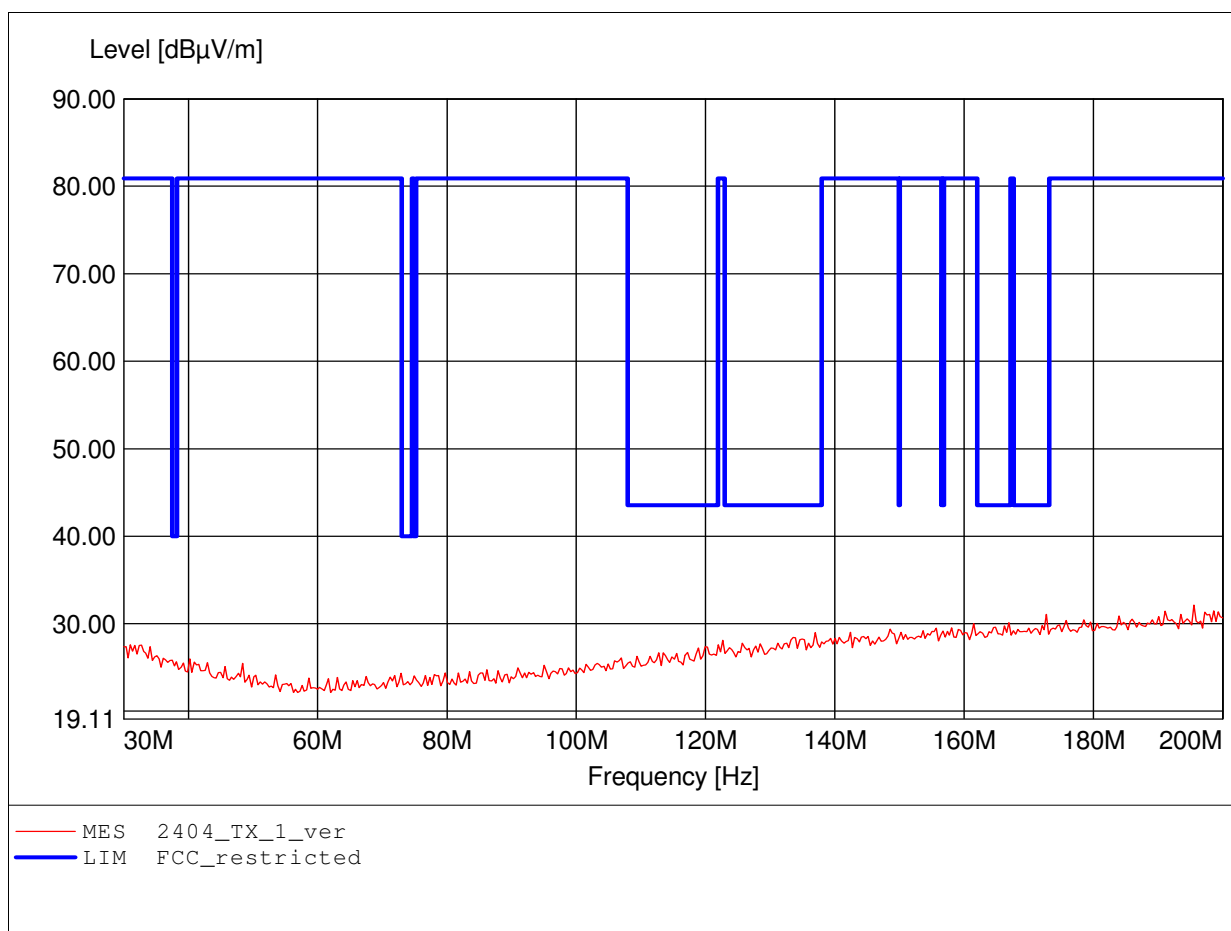
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 198.297MHz, Emax: 31.98dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

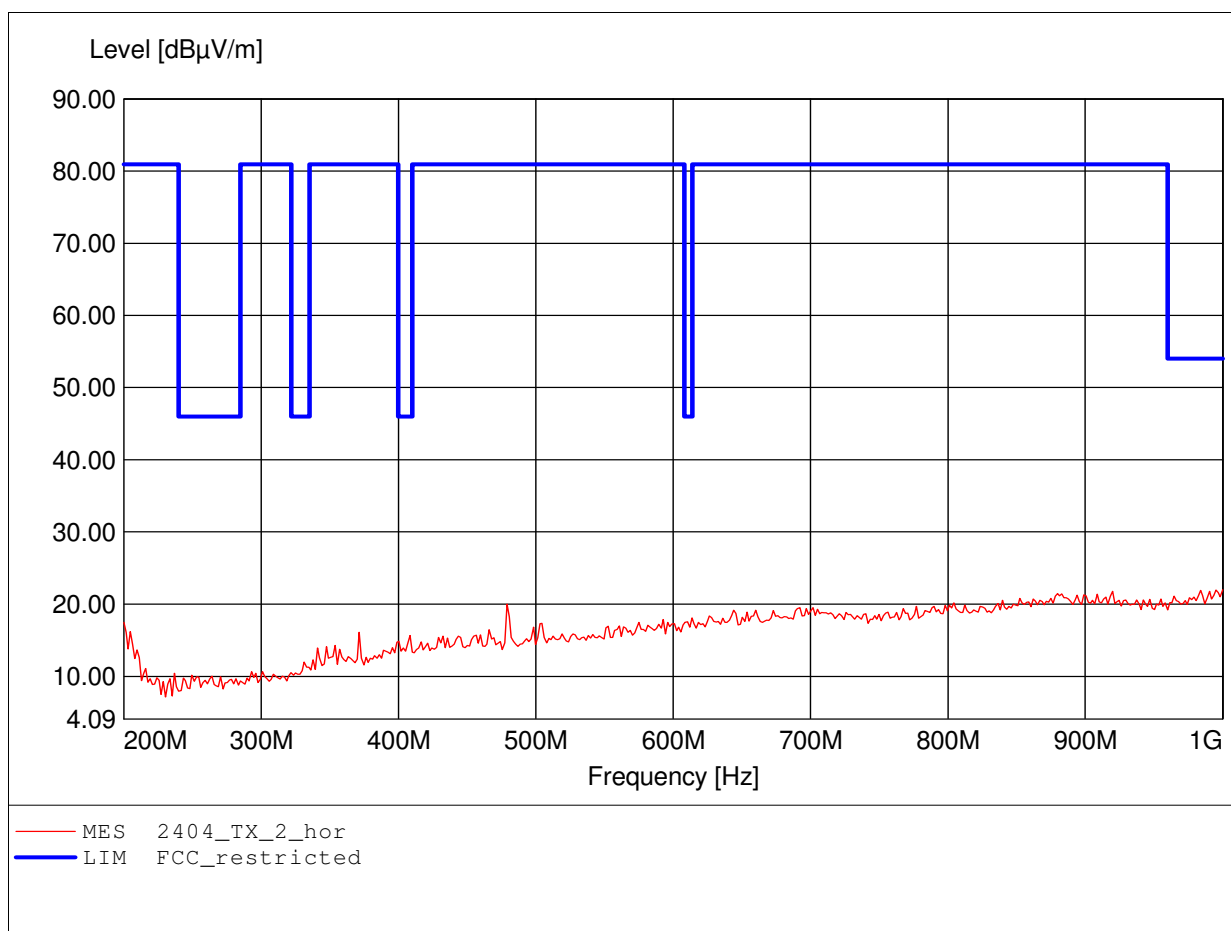
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 195.571MHz, Emax: 32.12dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

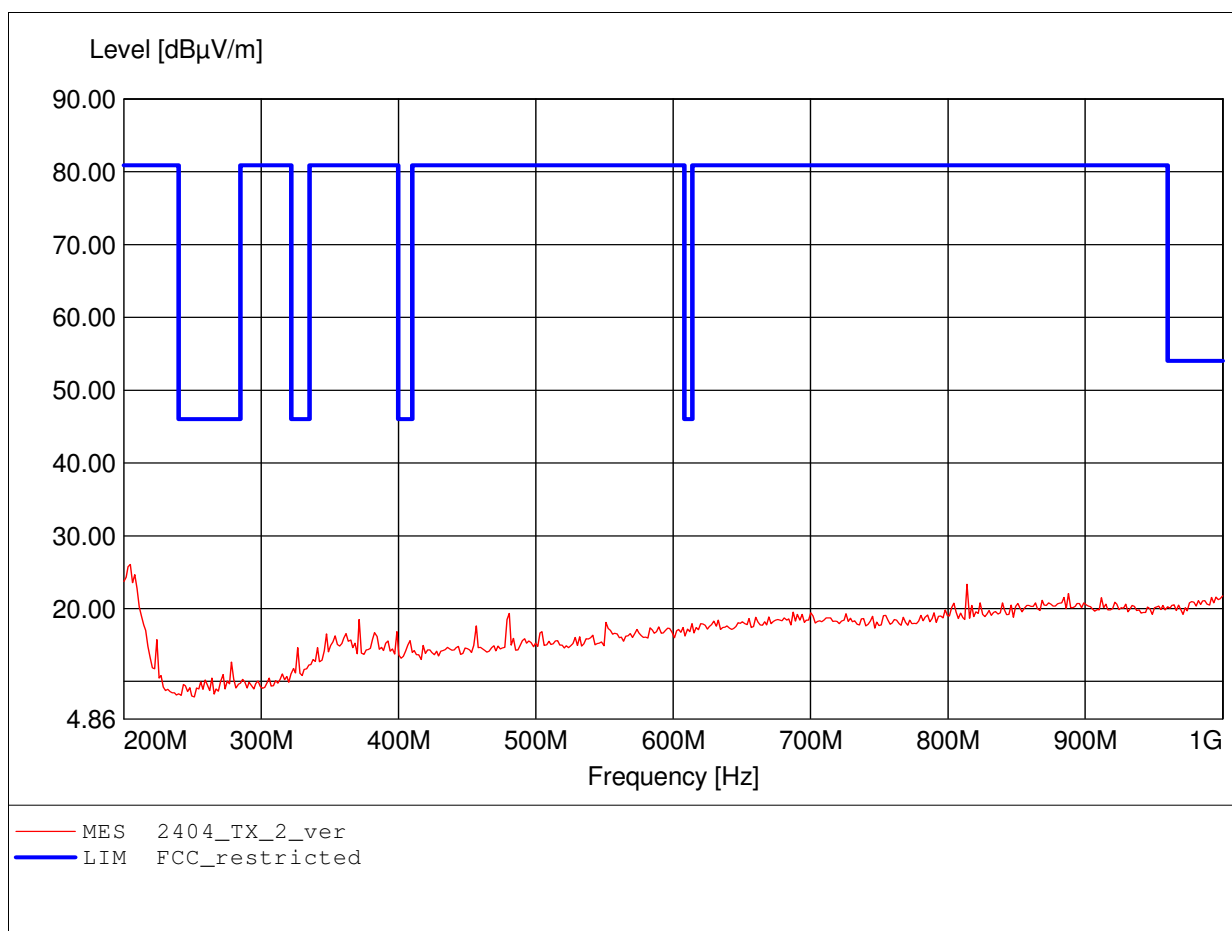
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 1.000GHz, Emax: 21.99dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

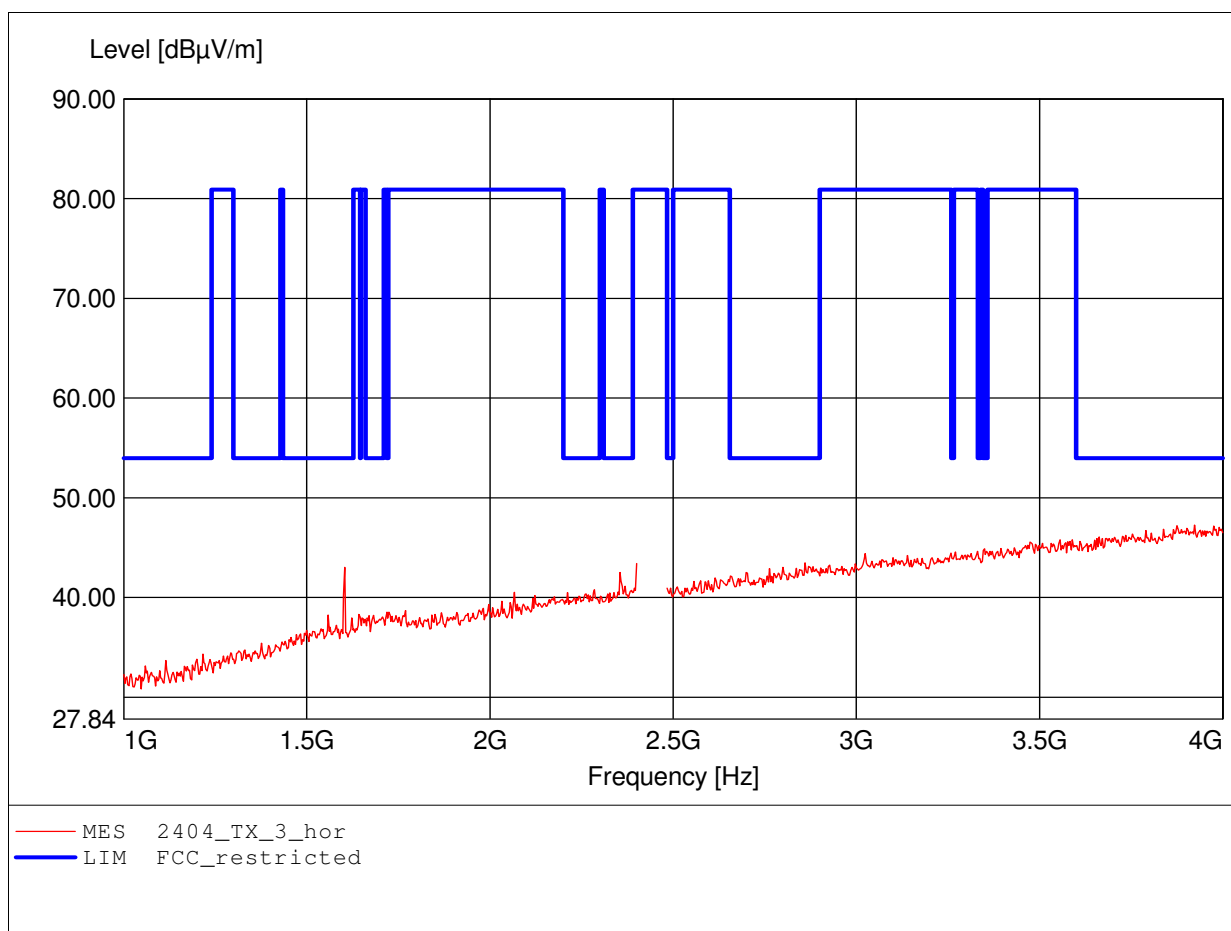
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 204.810MHz, Emax: 26.06dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

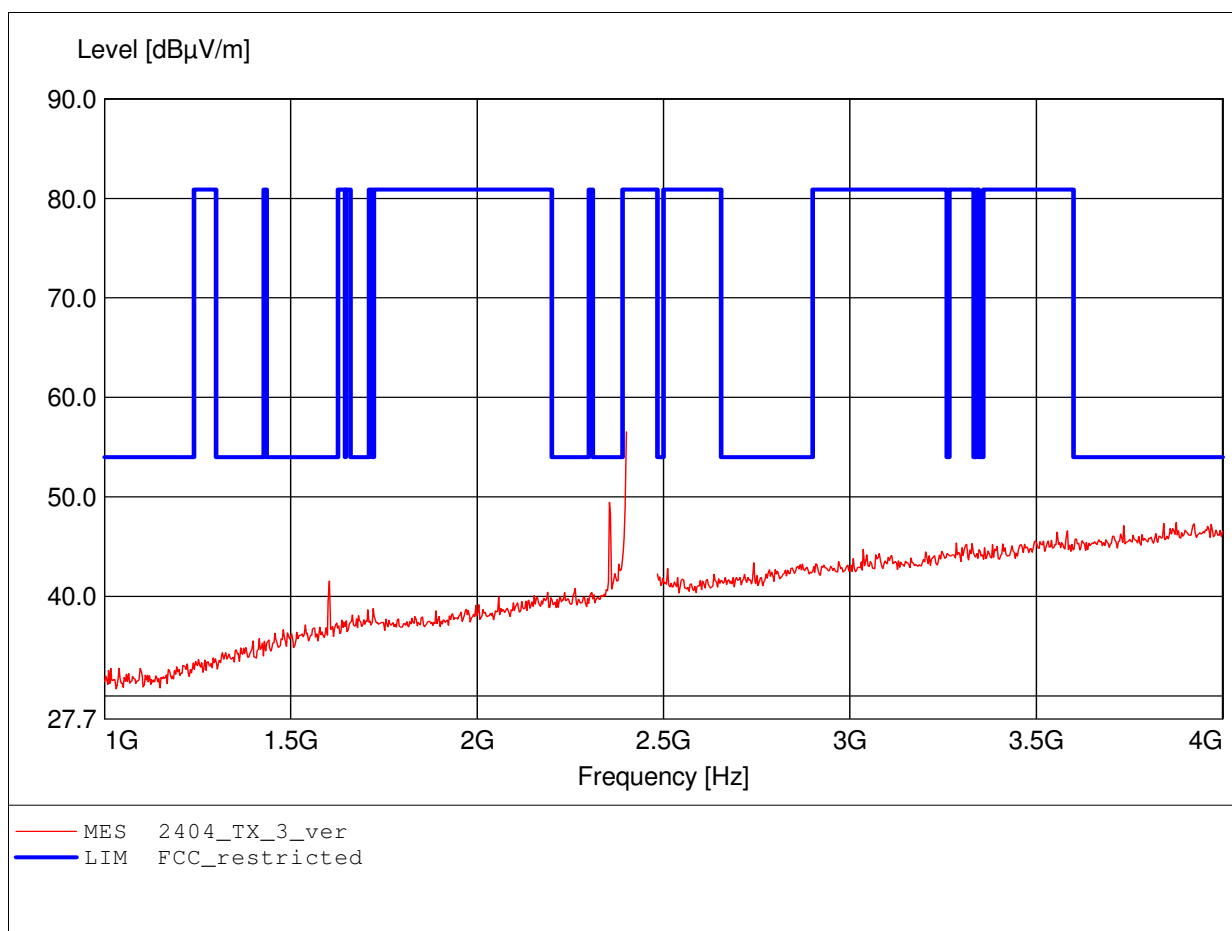
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, amplif.
Comment 2: Freq: 3.924GHz, Emax: 47.26dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

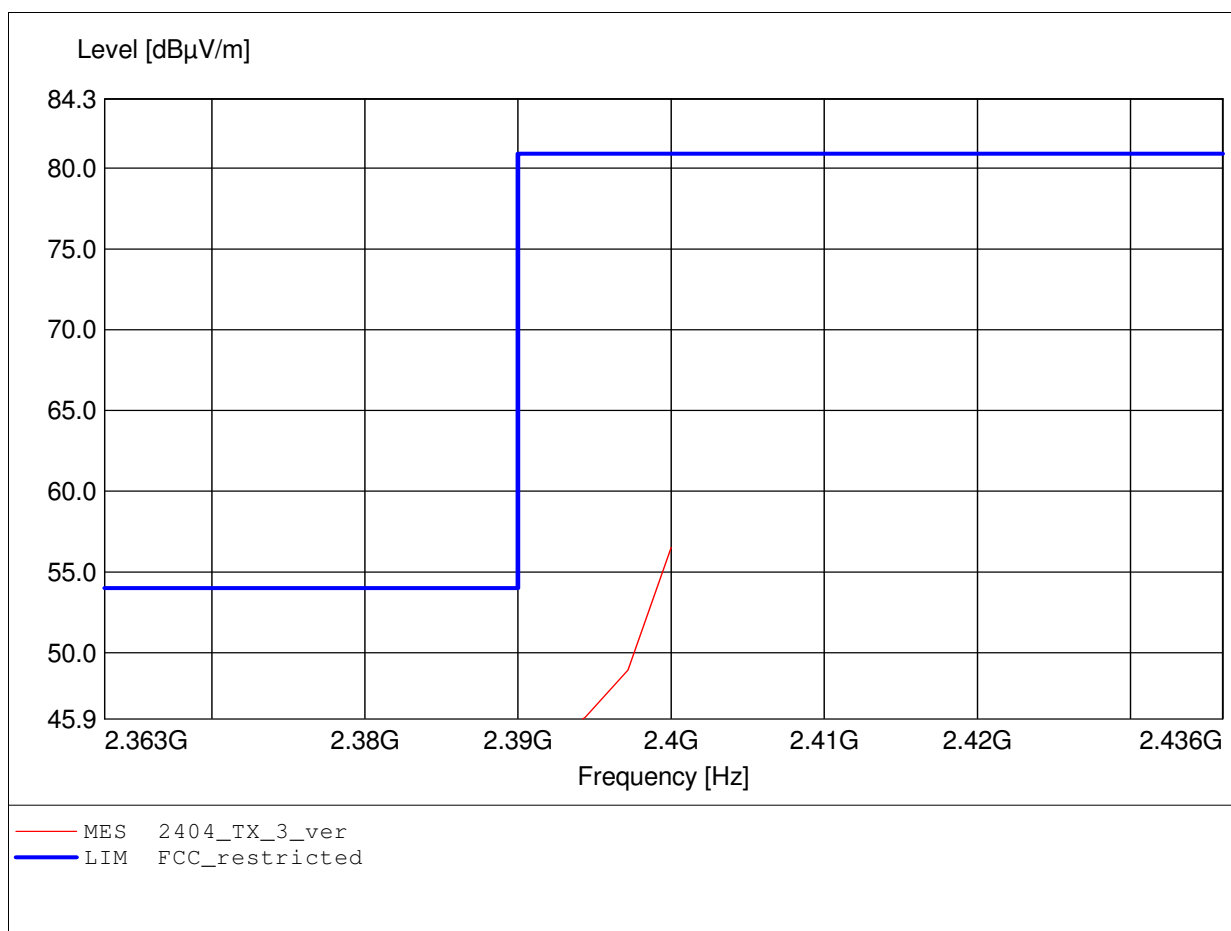
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, amplif.
Comment 2: Freq: 2.400GHz, Emax: 56.52dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

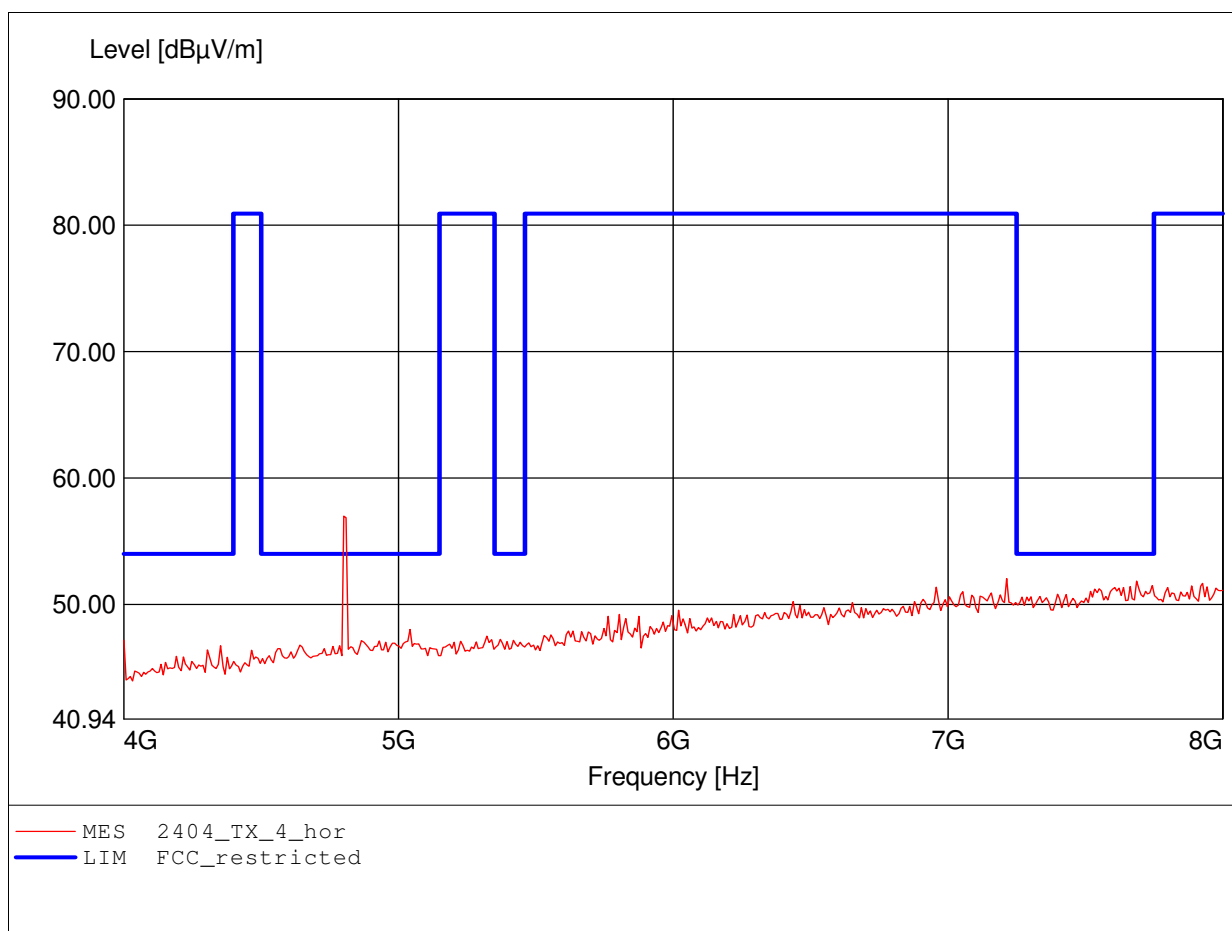
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, amplif.
Comment 2: Freq: 2.400GHz, Emax: 56.52dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

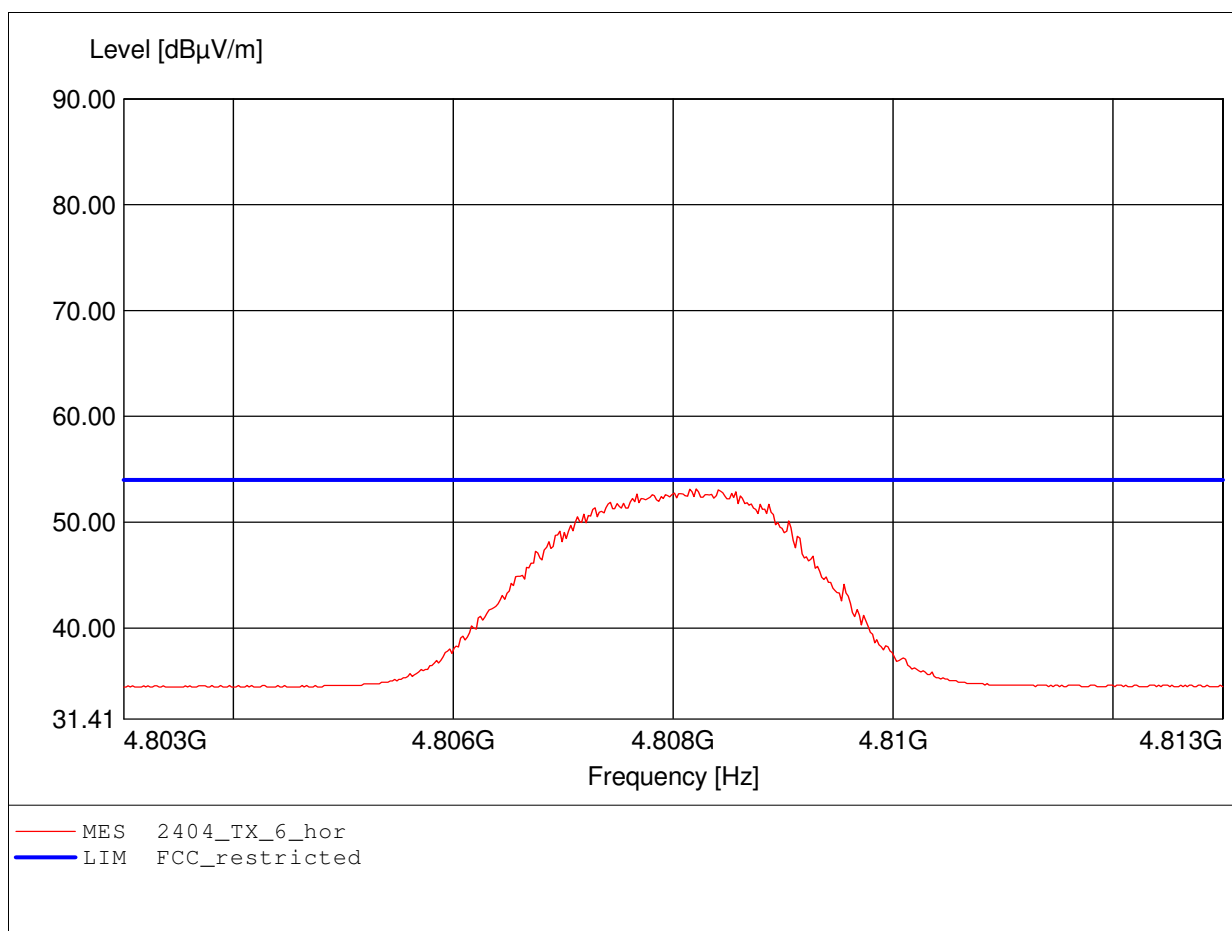
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 4.802GHz, Emax: 56.99dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

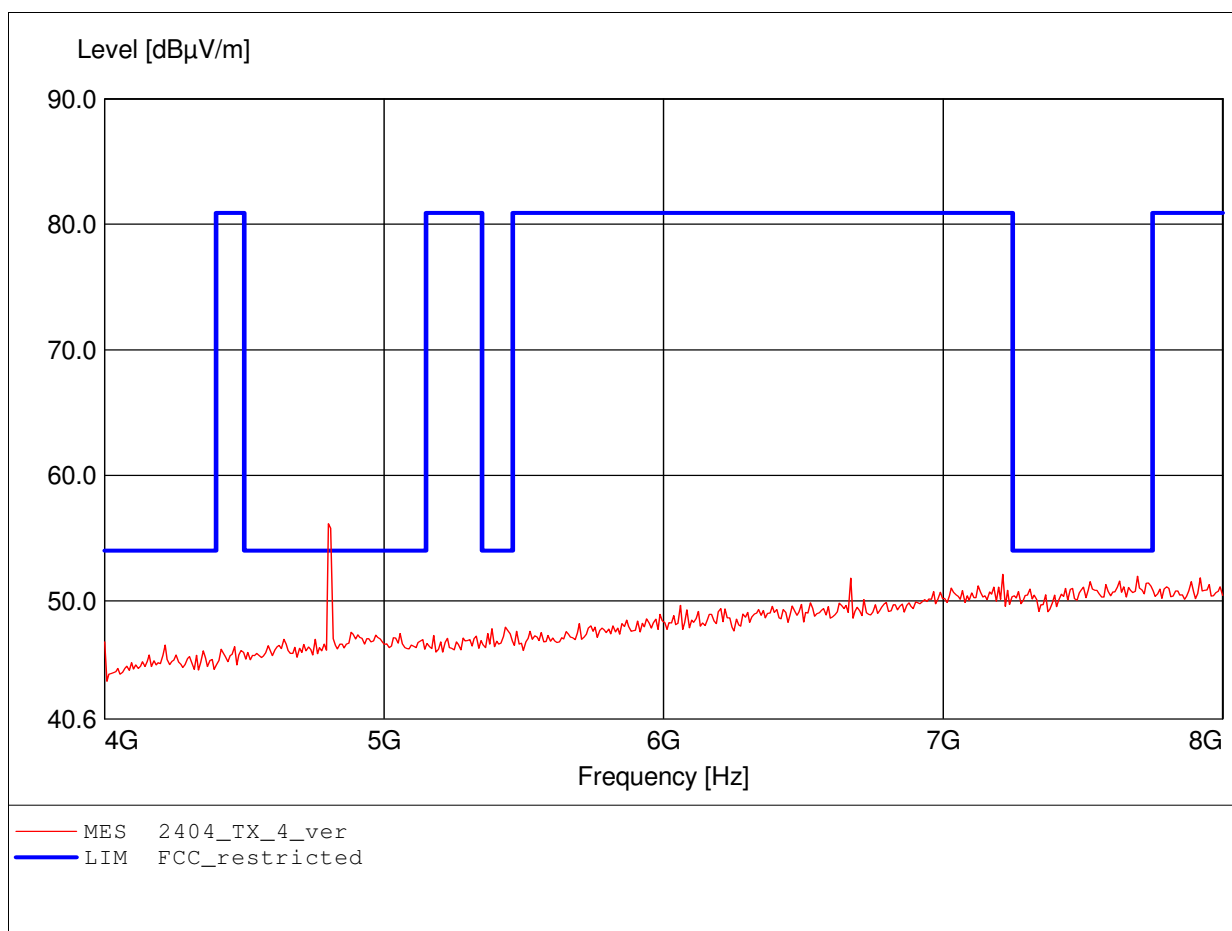
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Comment 2: Freq: 4.808GHz, Emax: 53.14dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

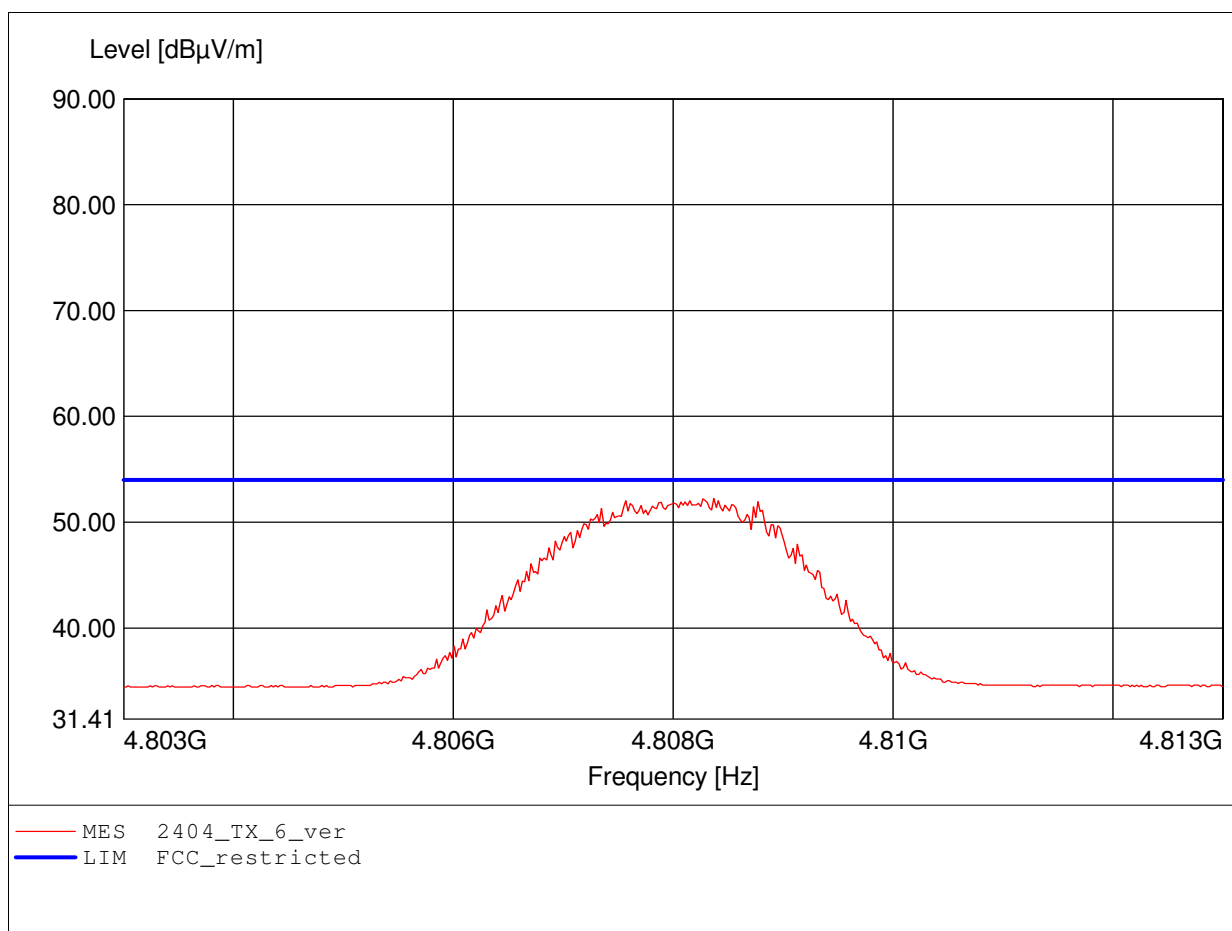
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 4.802GHz, Emax: 56.16dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

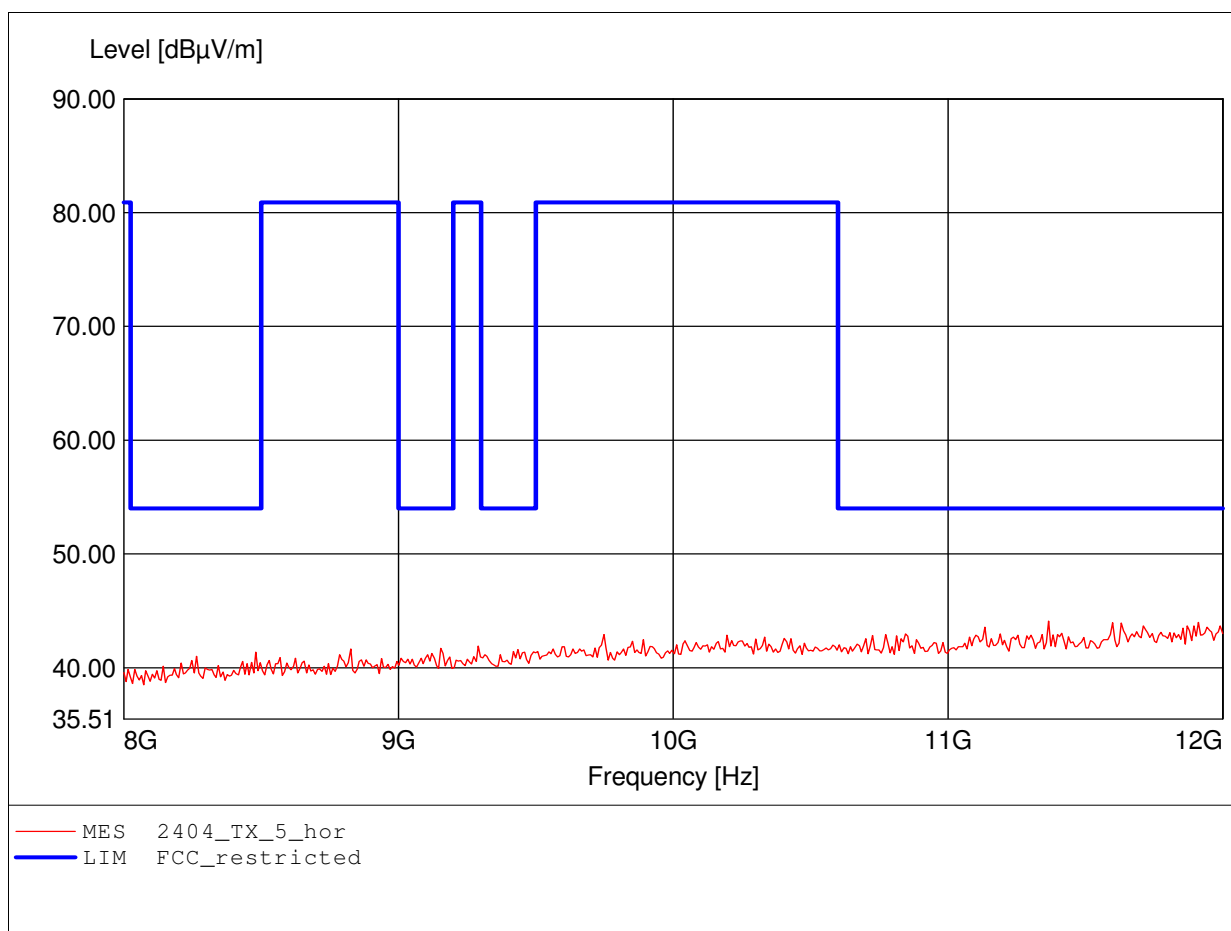
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Comment 2: Freq: 4.808GHz, Emax: 52.25dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

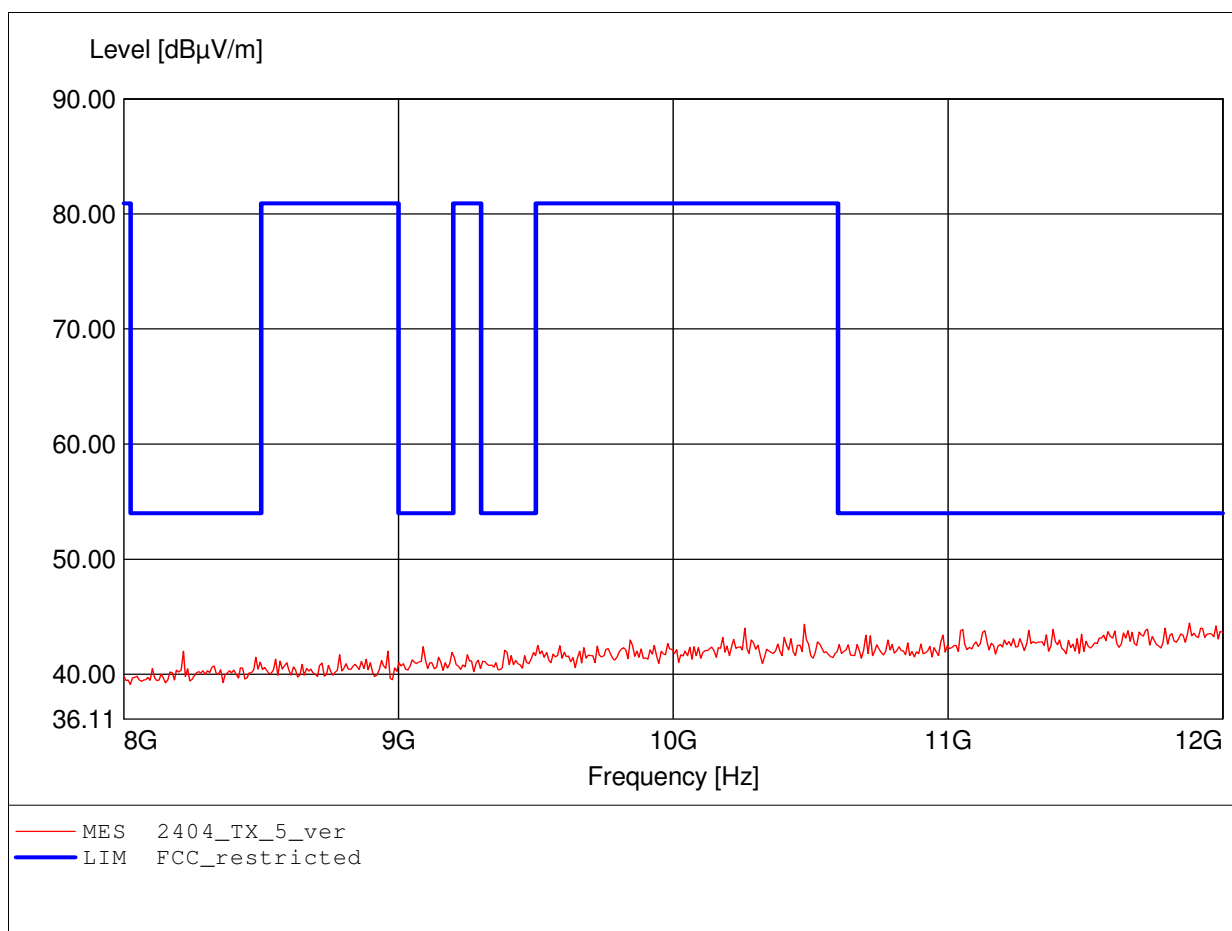
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 11.367GHz, Emax: 44.12dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

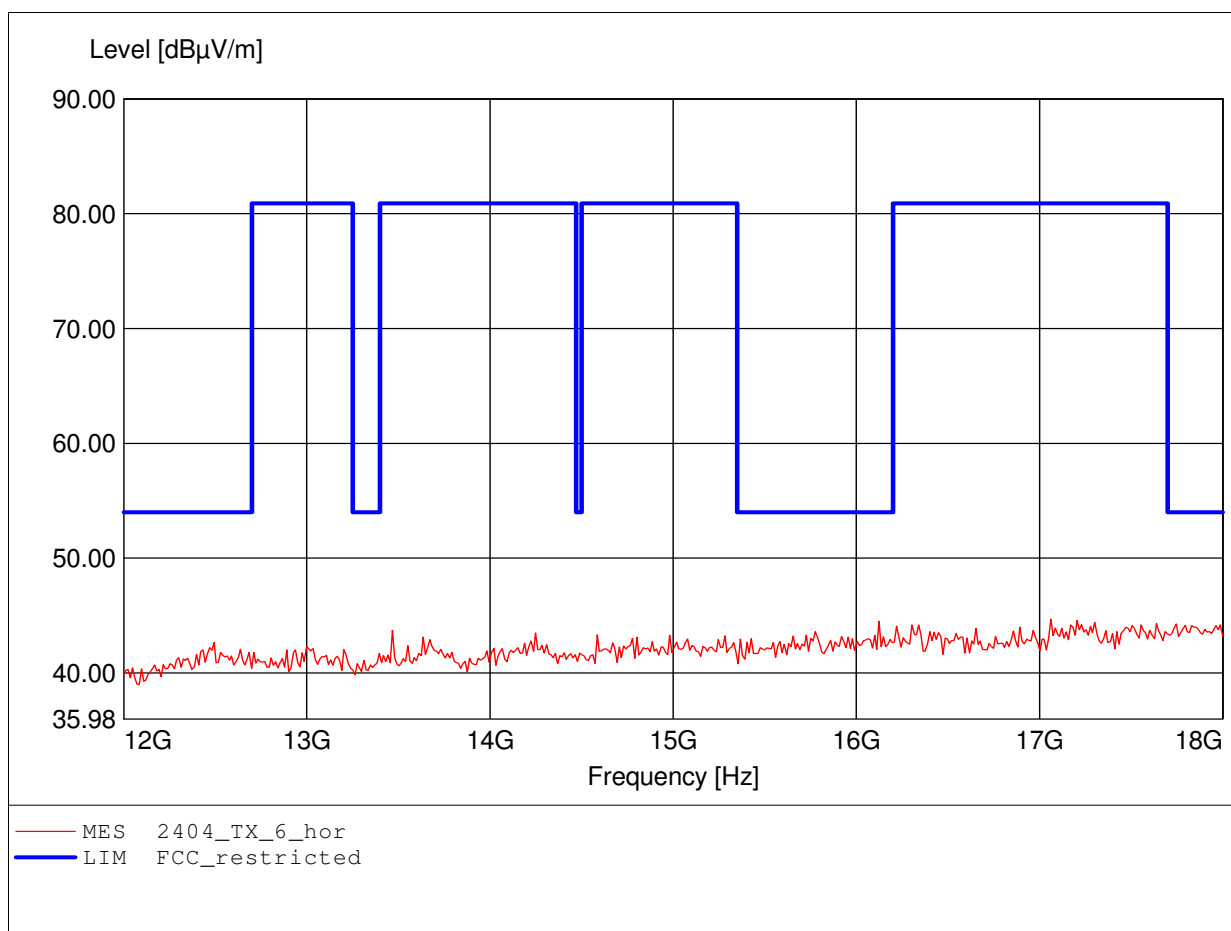
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 11.880GHz, Emax: 44.45dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

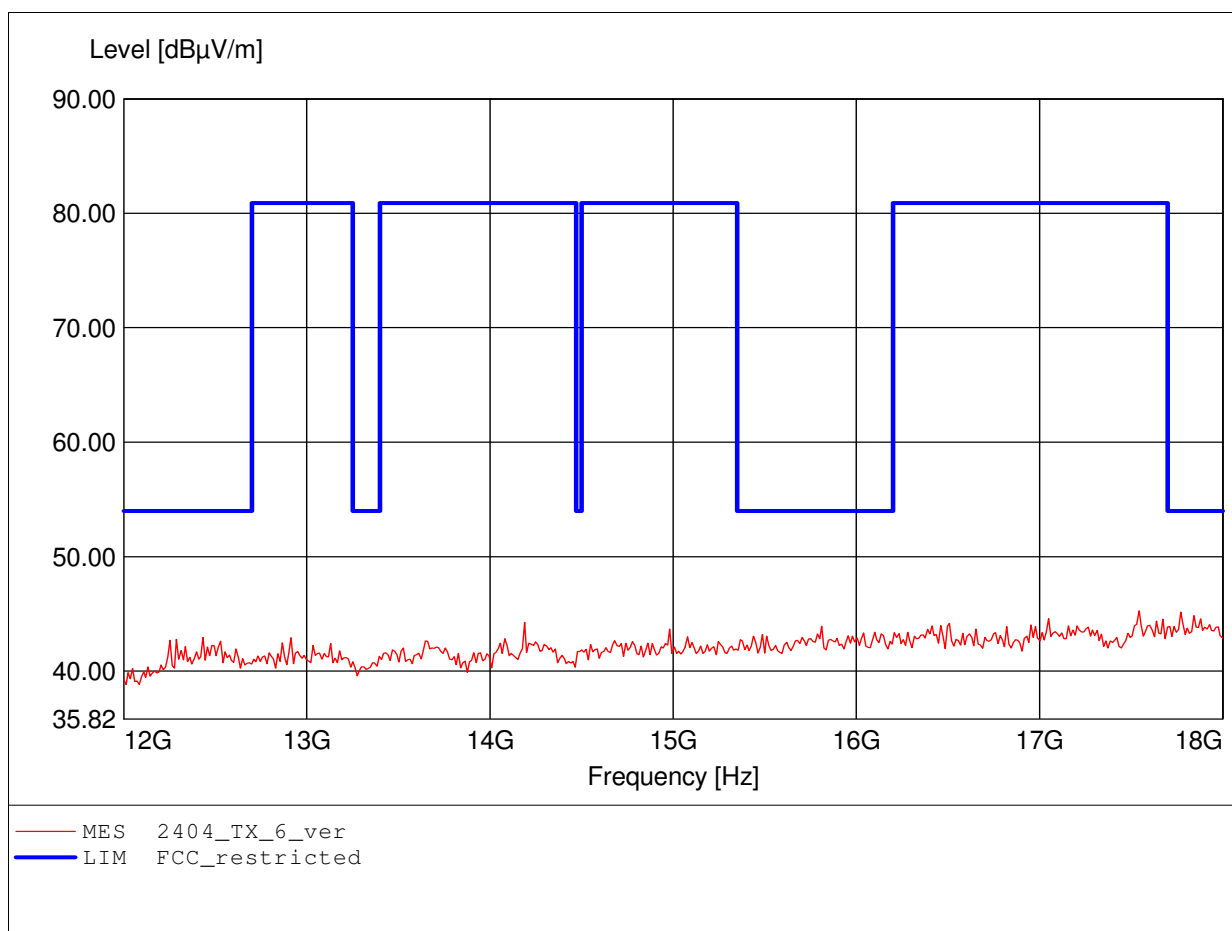
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 17.062GHz, Emax: 44.68dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

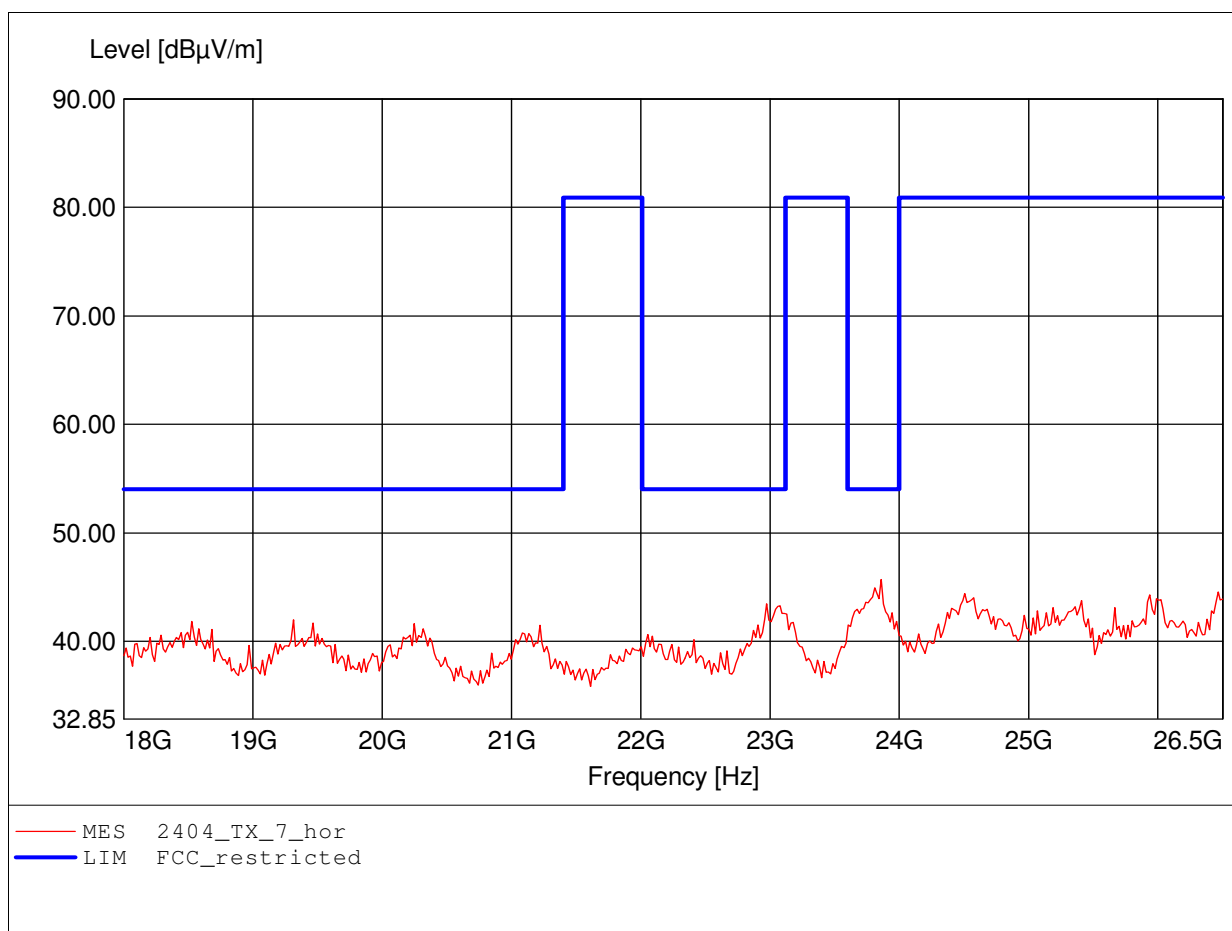
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 17.543GHz, Emax: 45.28dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

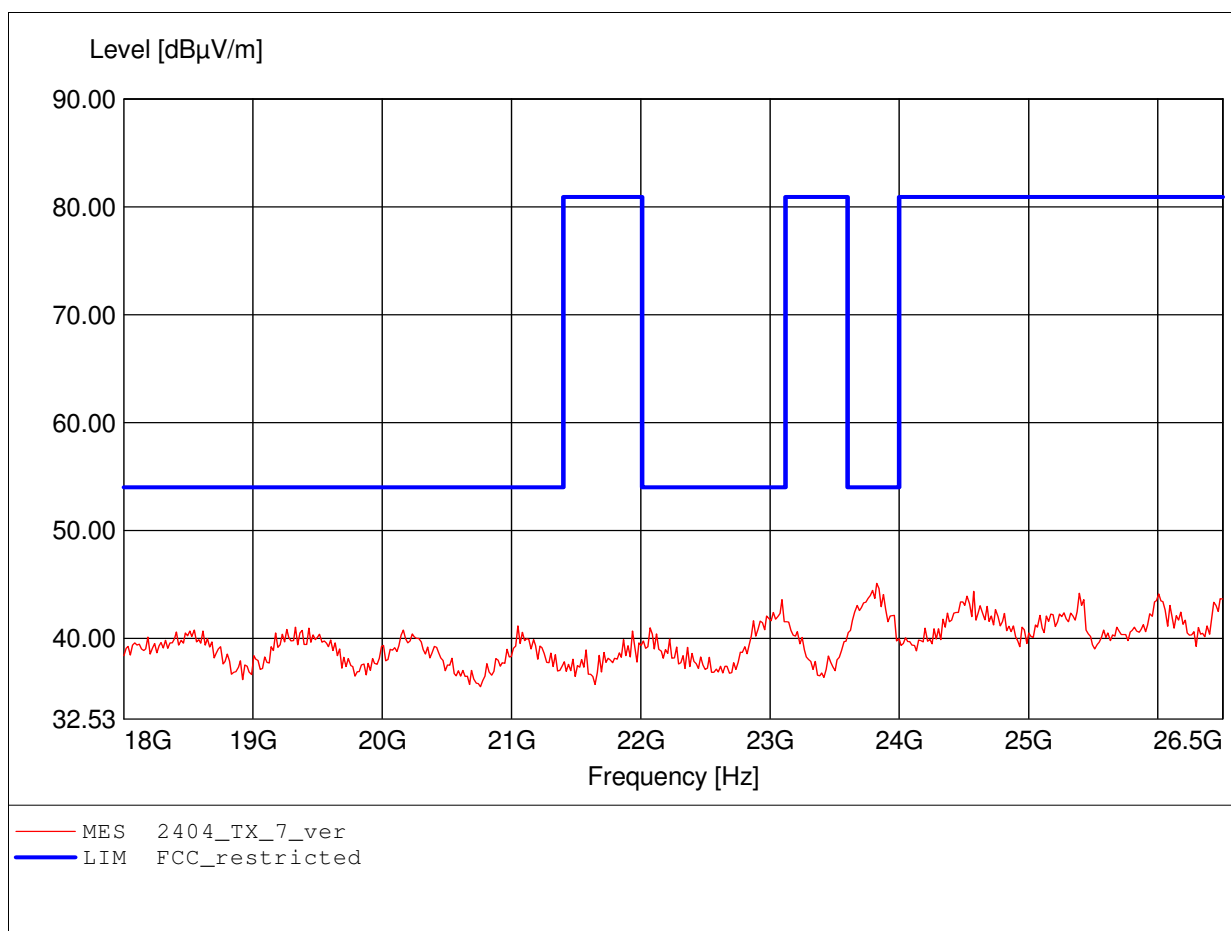
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq: 23.860GHz, Emax: 45.69dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

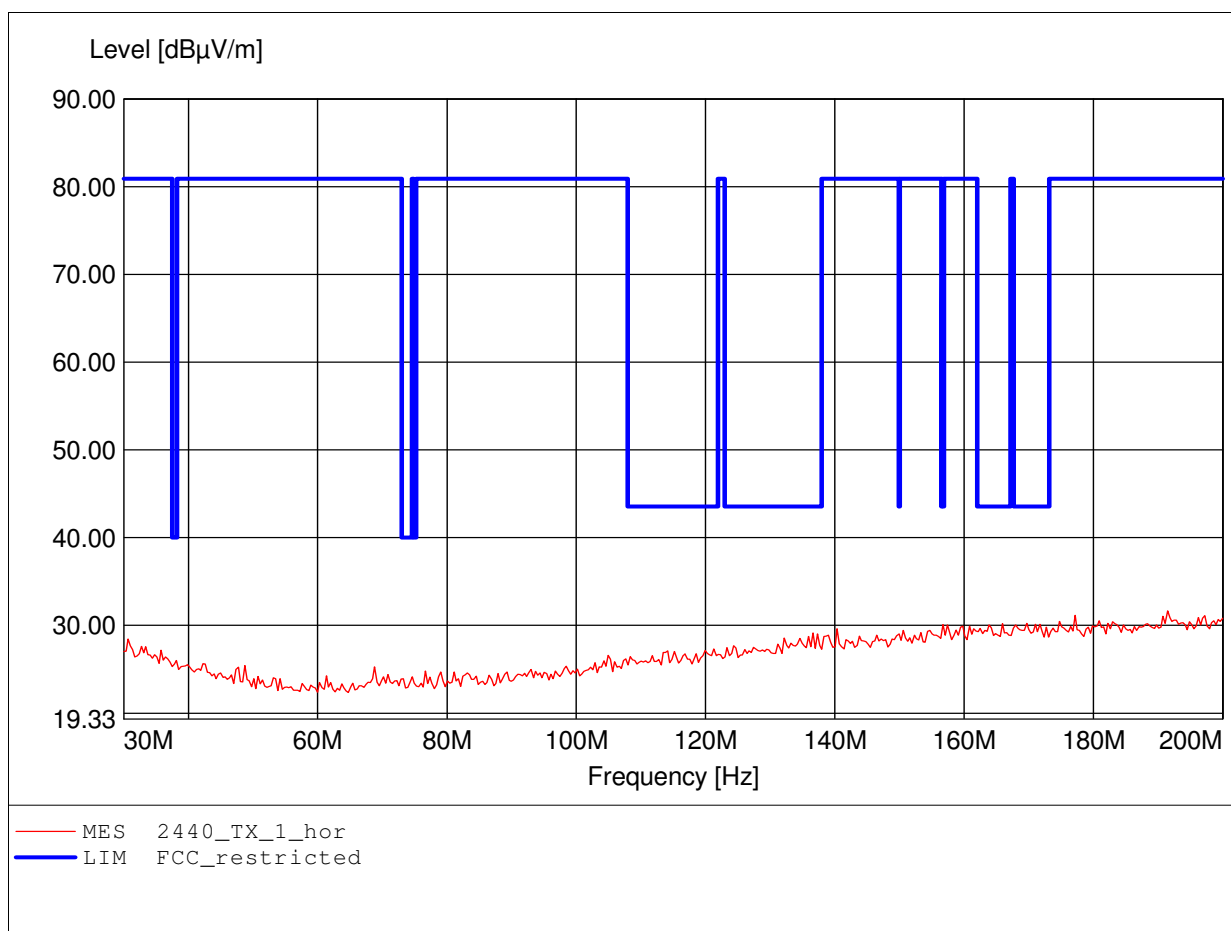
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2404
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq: 23.826GHz, Emax: 45.09dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

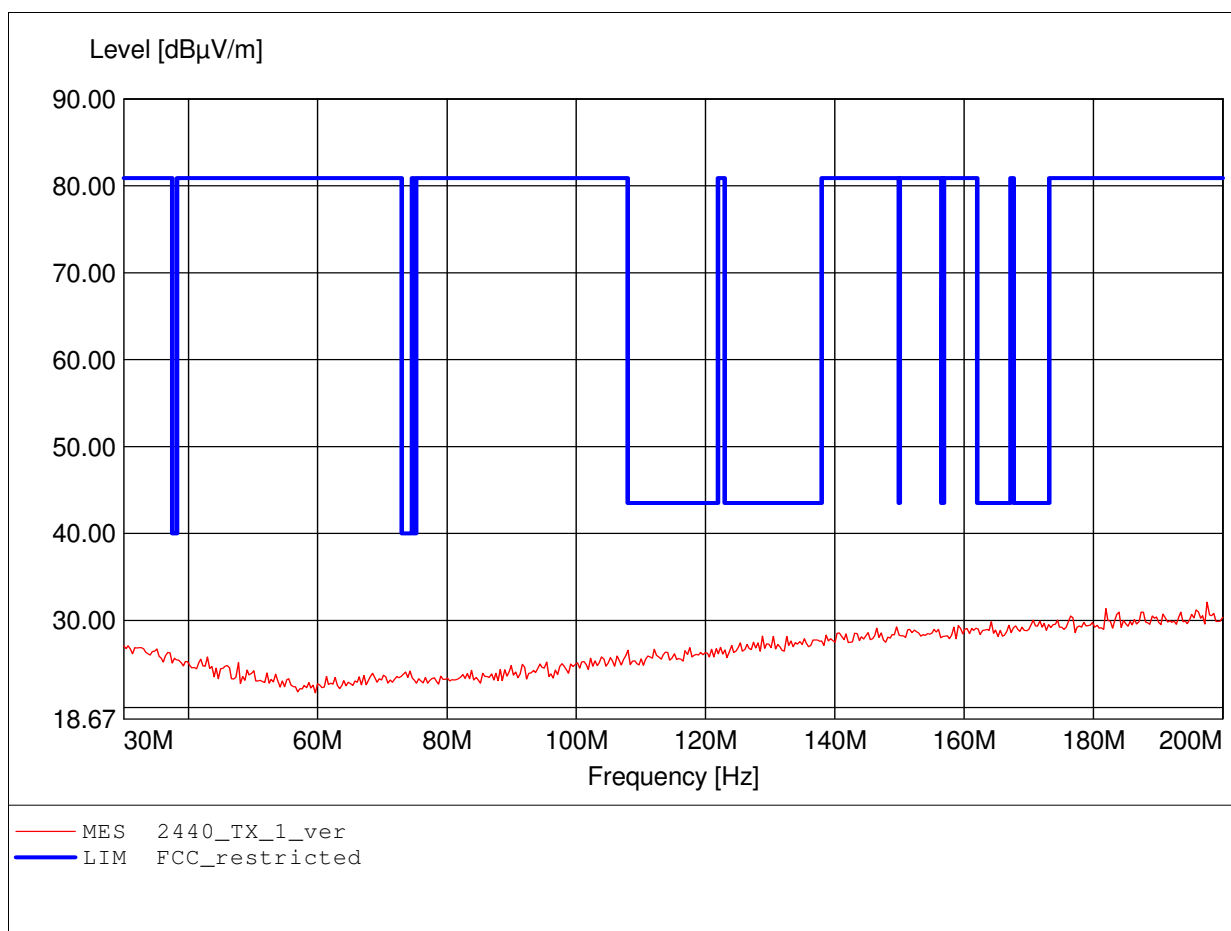
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 191.483MHz, Emax: 31.65dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

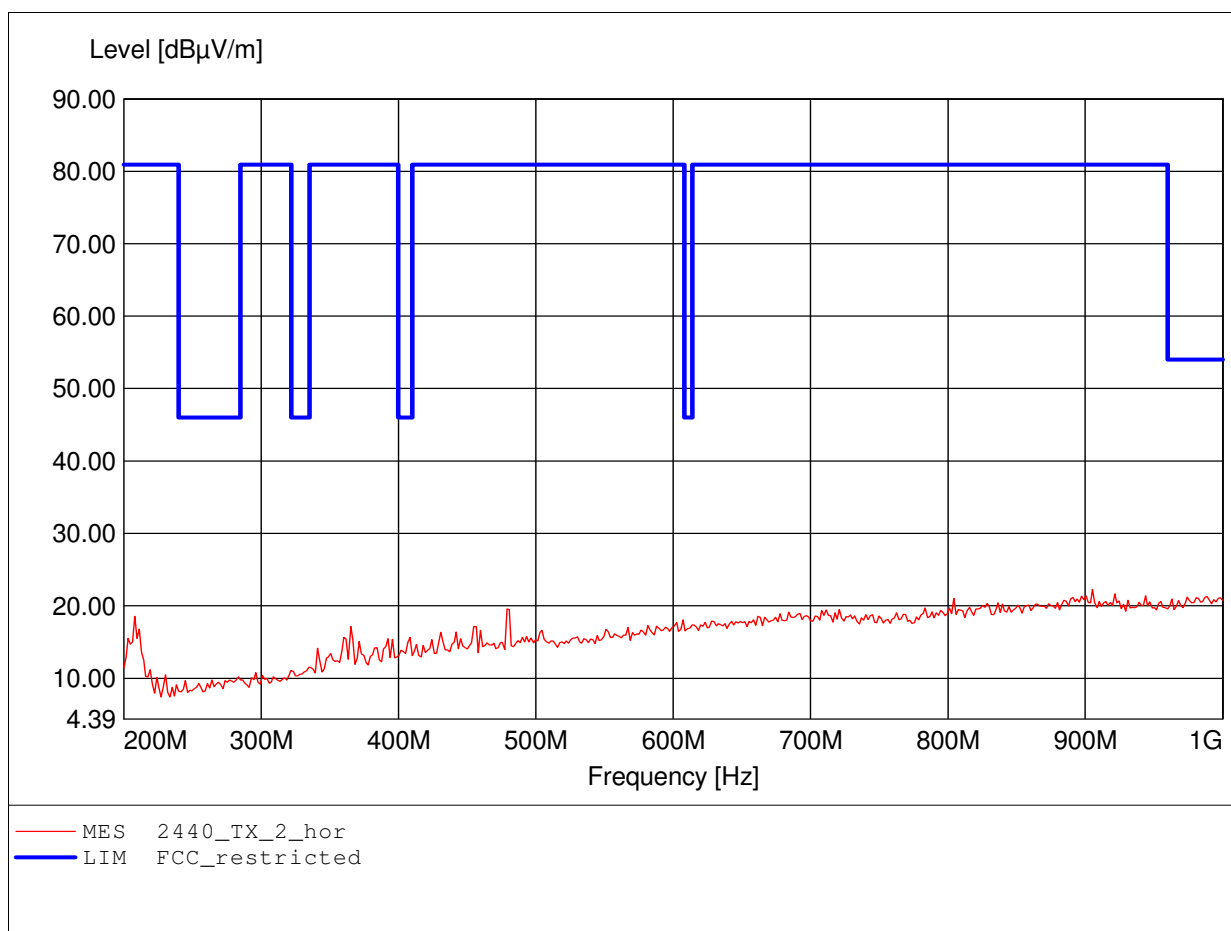
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 197.615MHz, Emax: 32.09dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

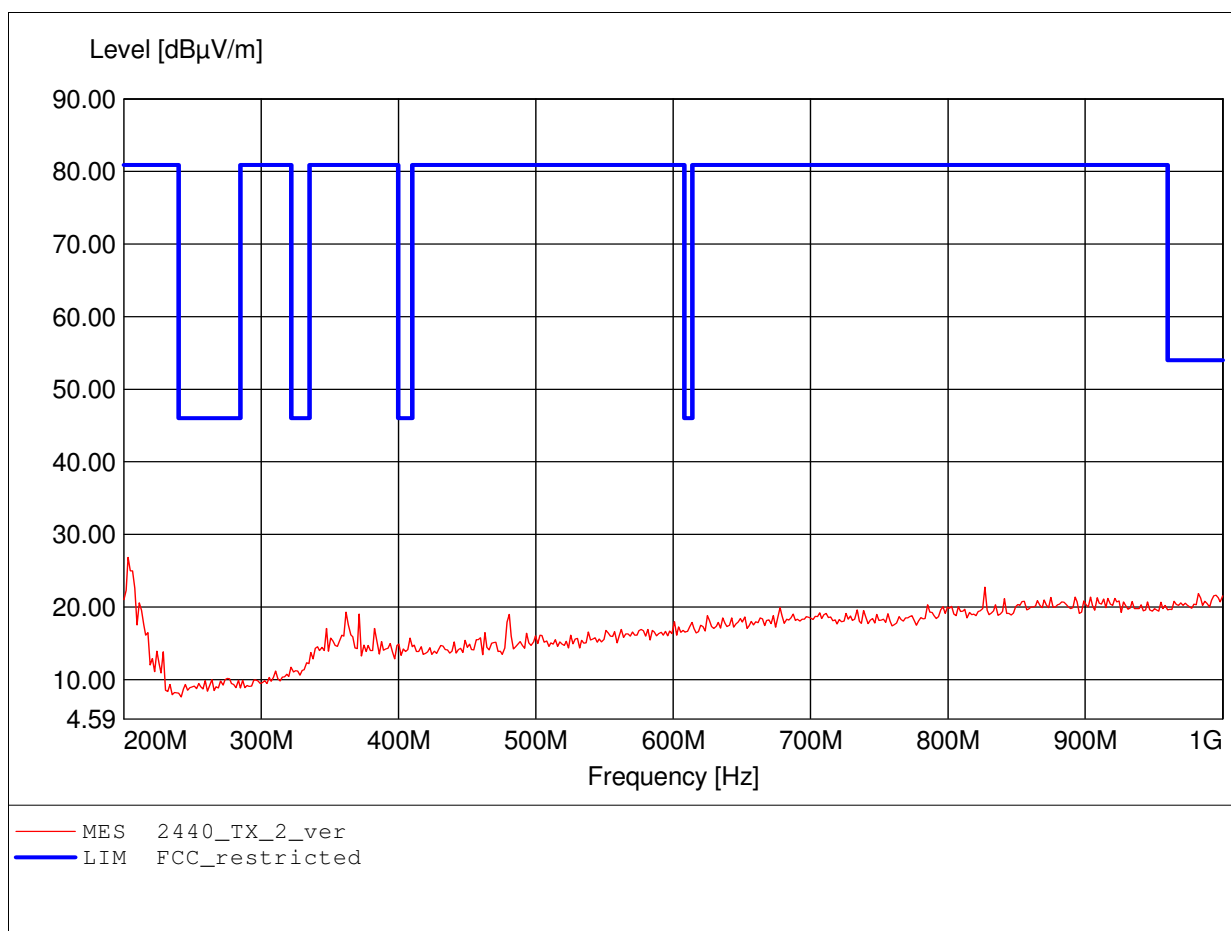
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 905.411MHz, Emax: 22.26dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

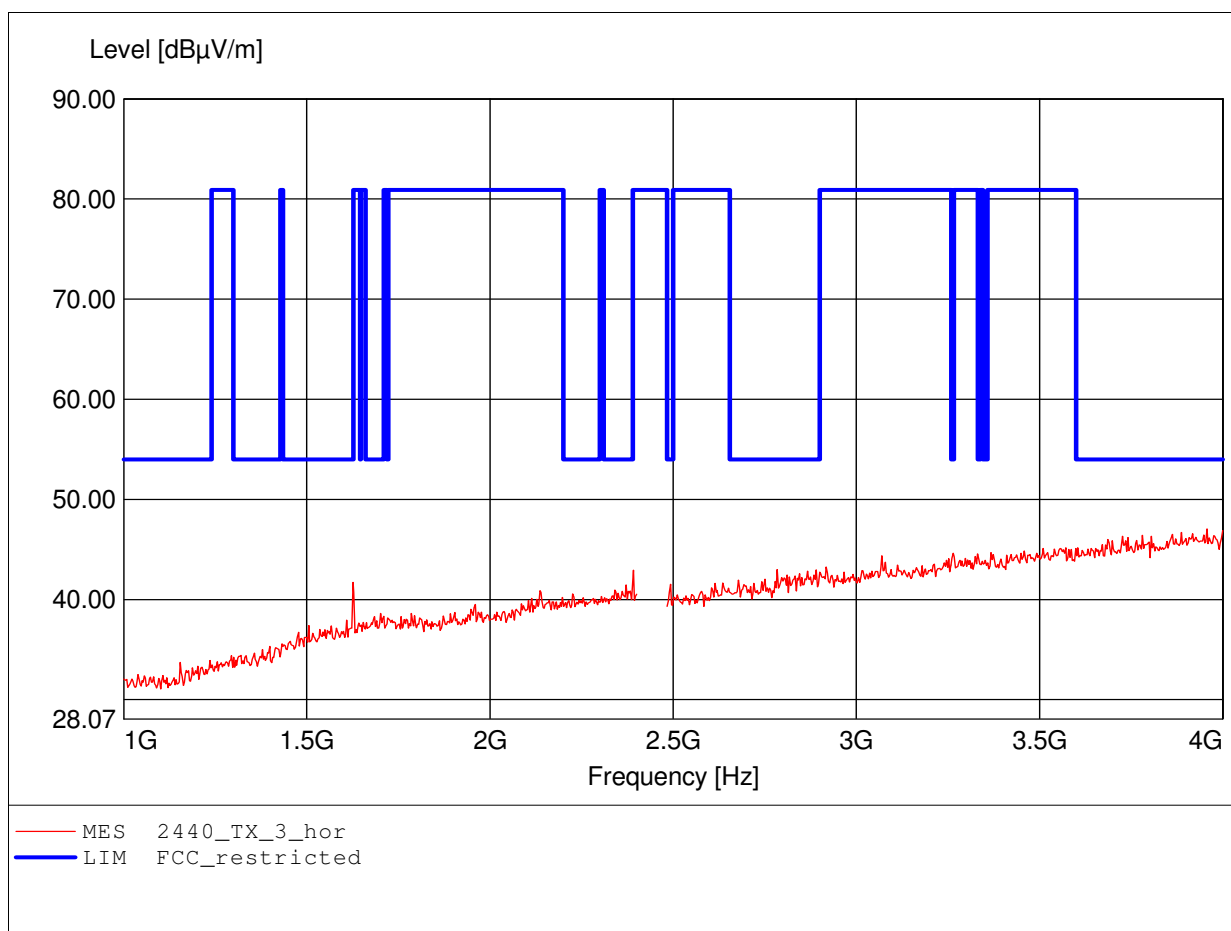
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 203.206MHz, Emax: 26.84dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

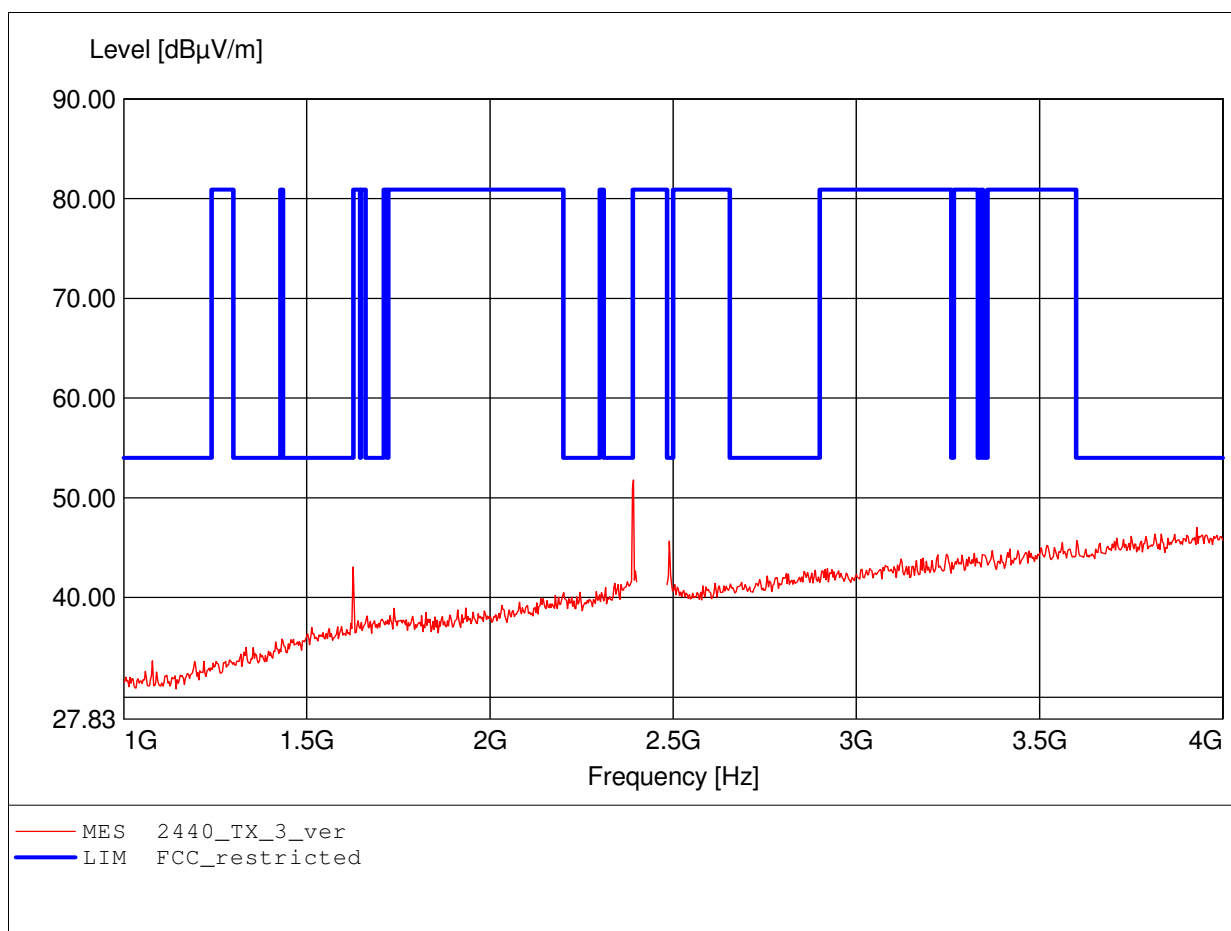
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 025, amplif.
Comment 2: Freq: 3.957GHz, Emax: 47.06dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

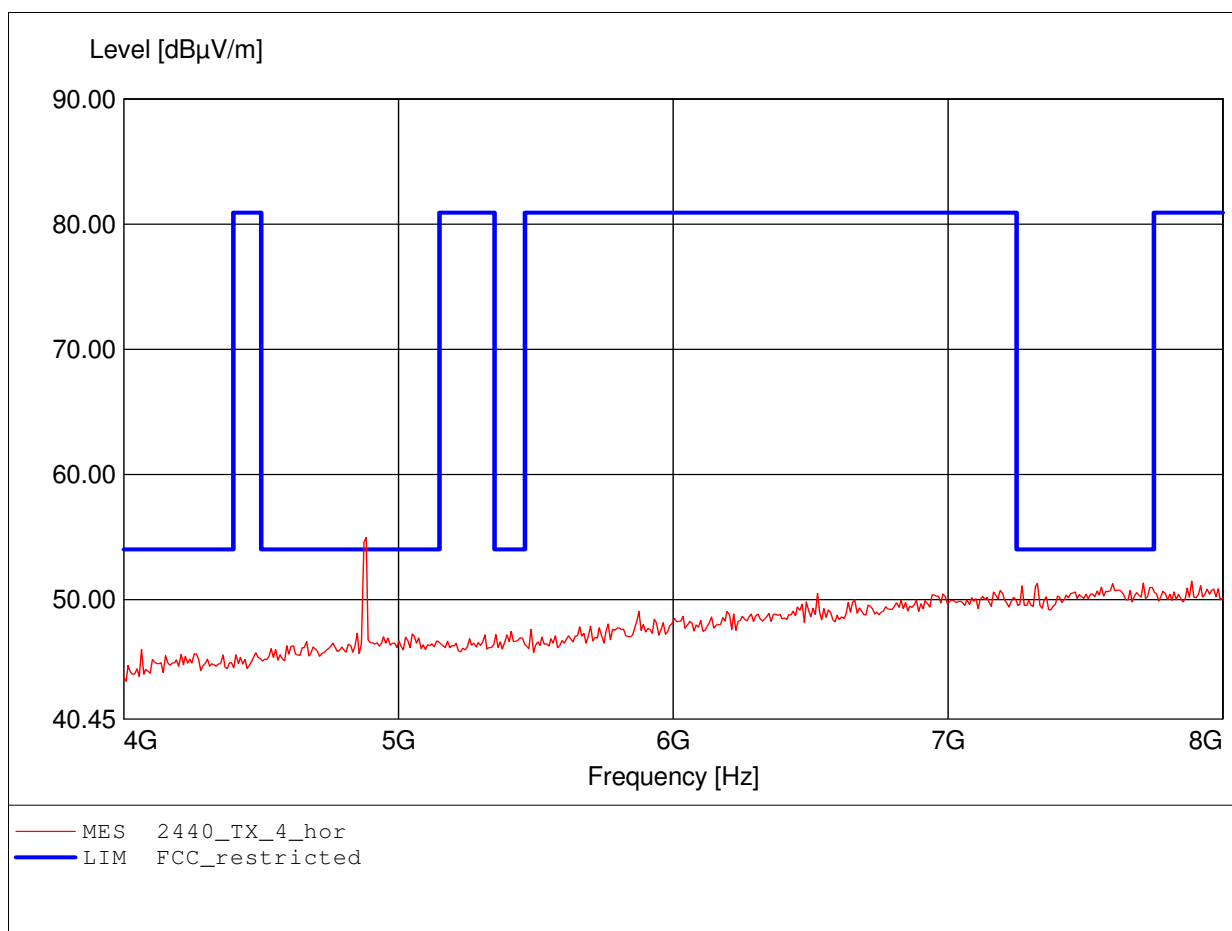
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 025, amplif.
Comment 2: Freq: 2.392GHz, Emax: 51.81dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

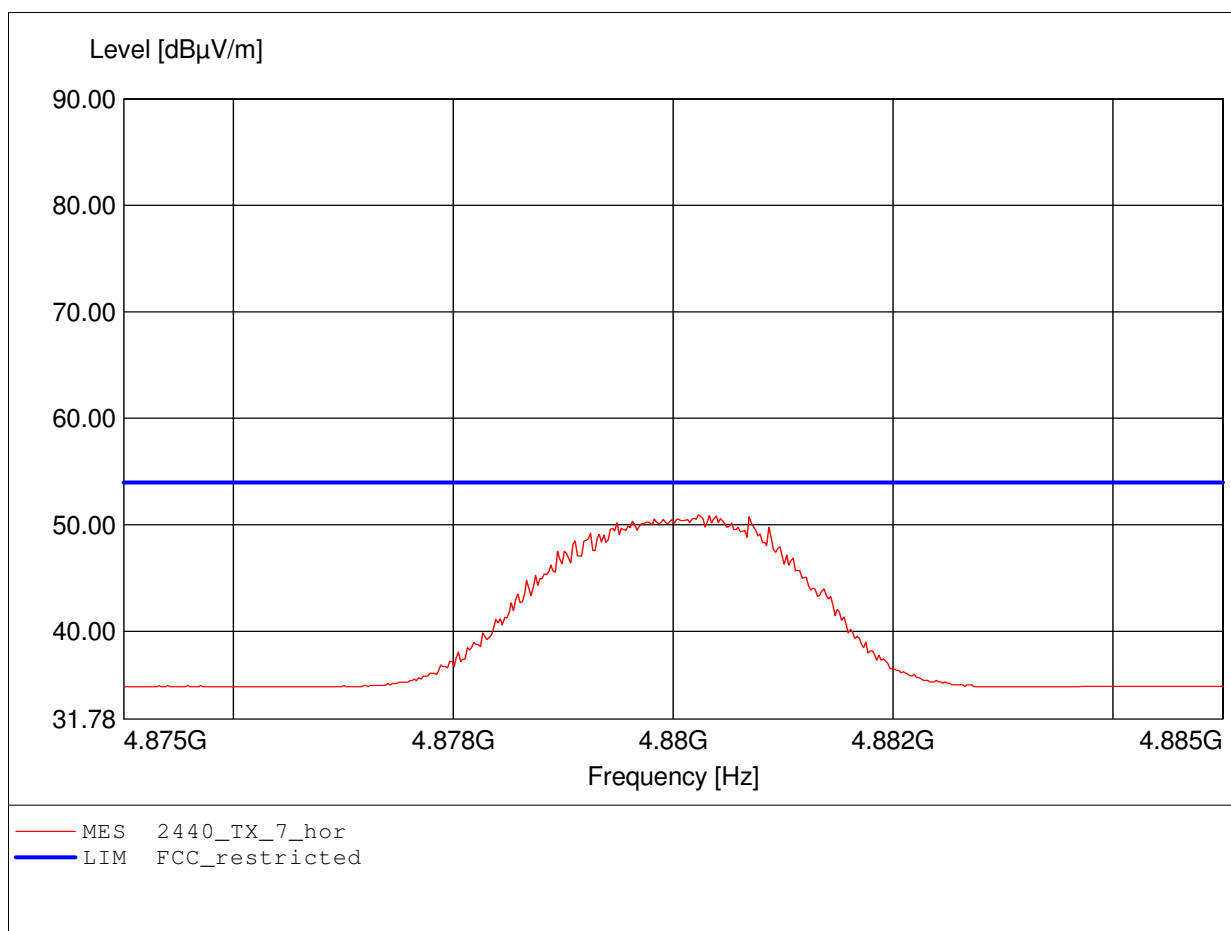
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 4.882GHz, Emax: 54.95dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

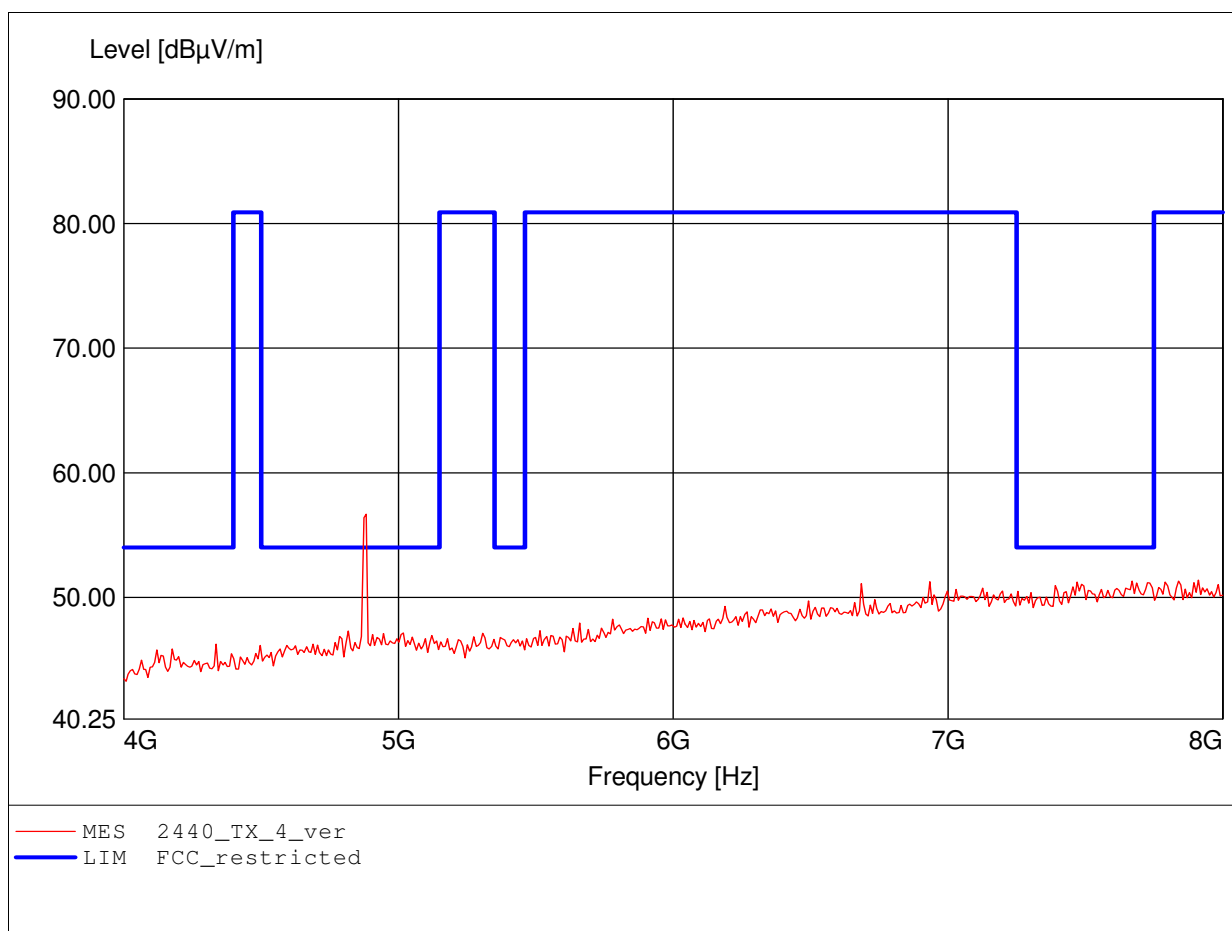
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq: 4.880GHz, Emax: 50.93dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

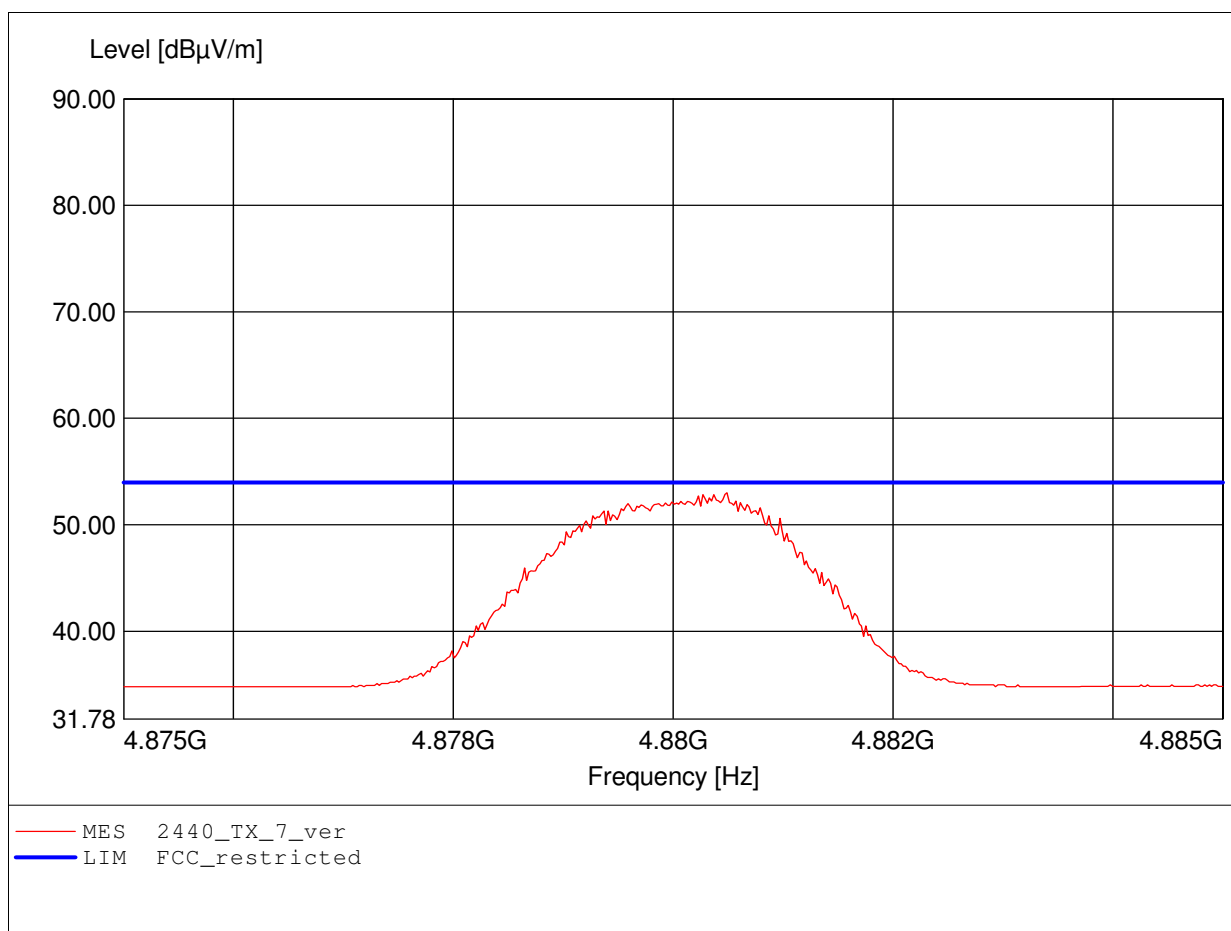
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 4.882GHz, Emax: 56.69dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

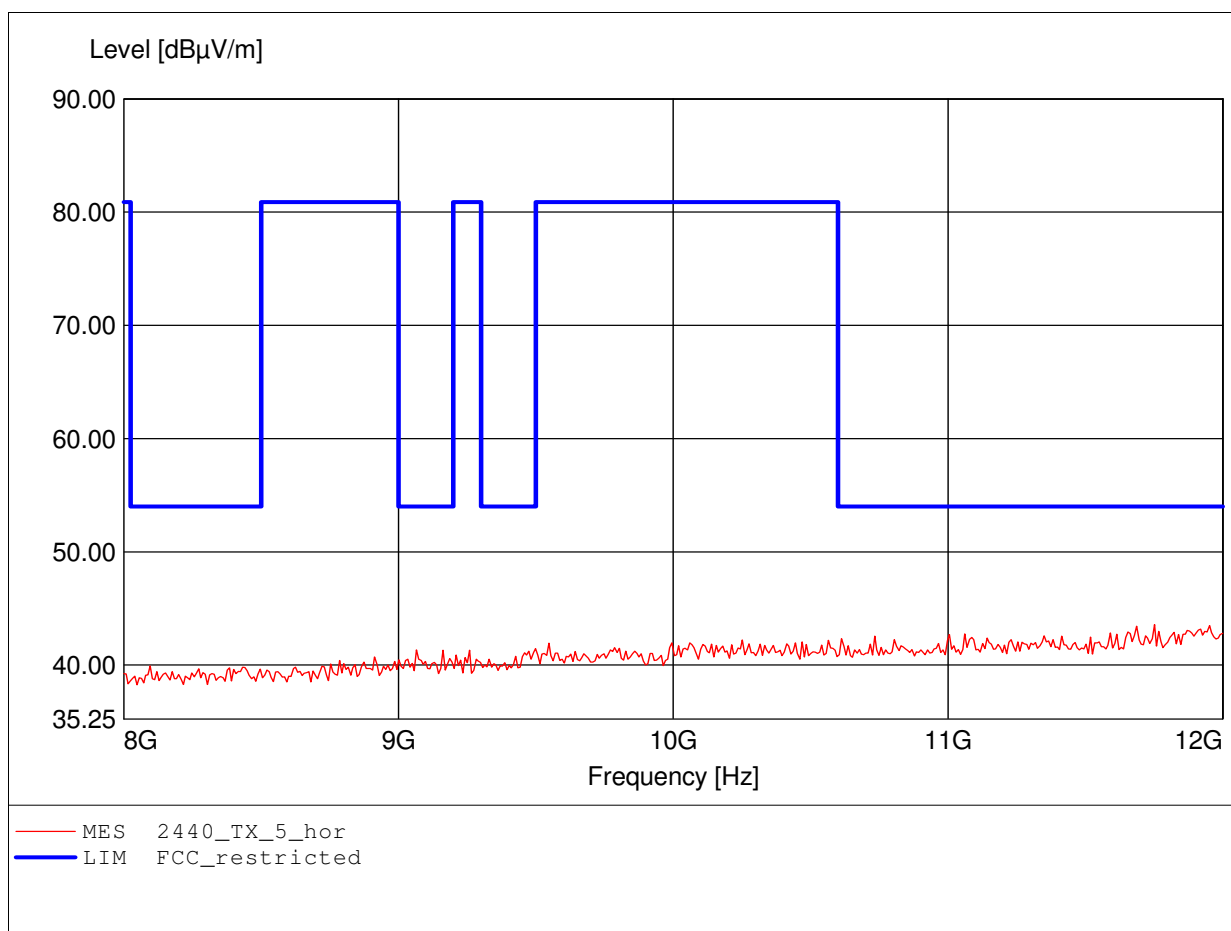
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq: 4.880GHz, Emax: 53.00dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

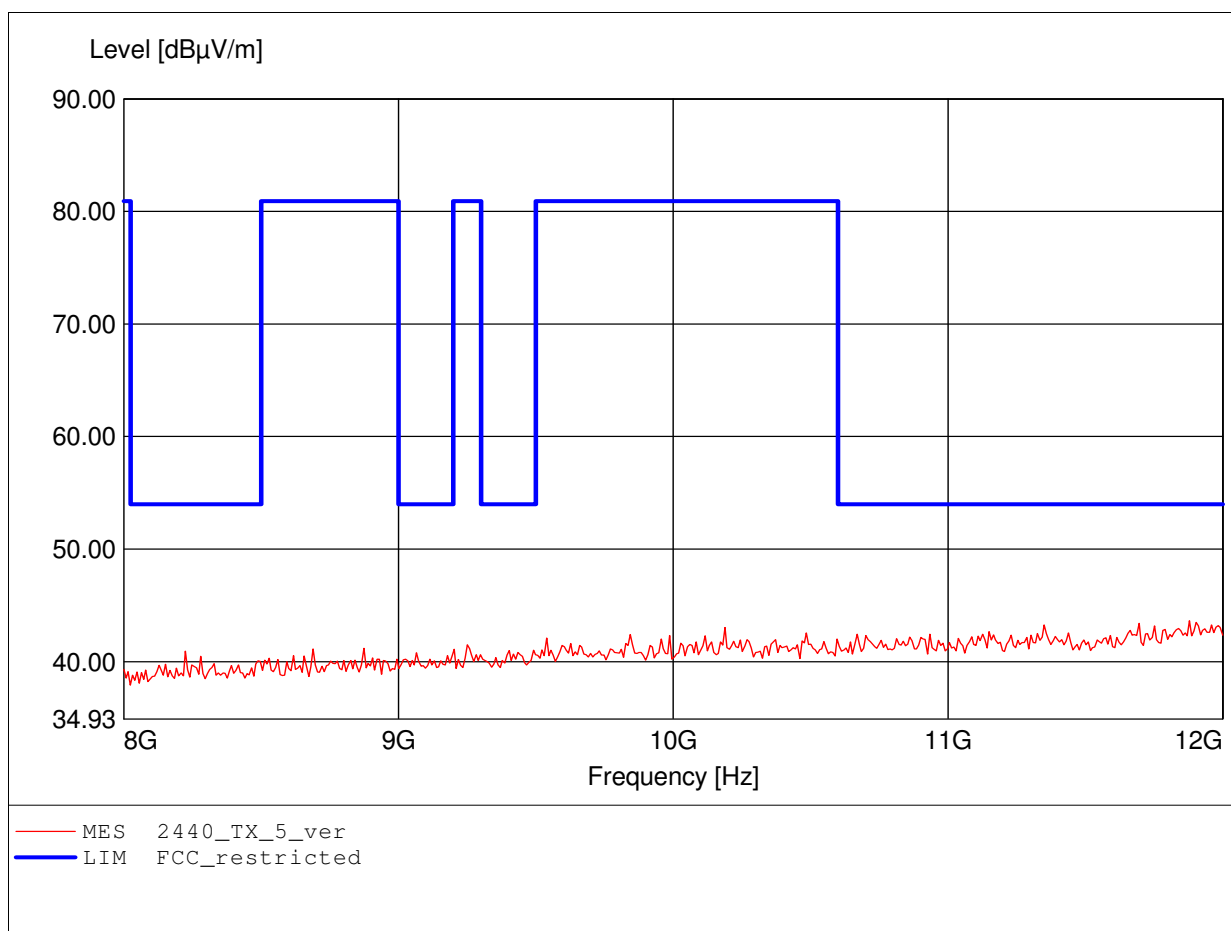
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 11.752GHz, Emax: 43.57dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

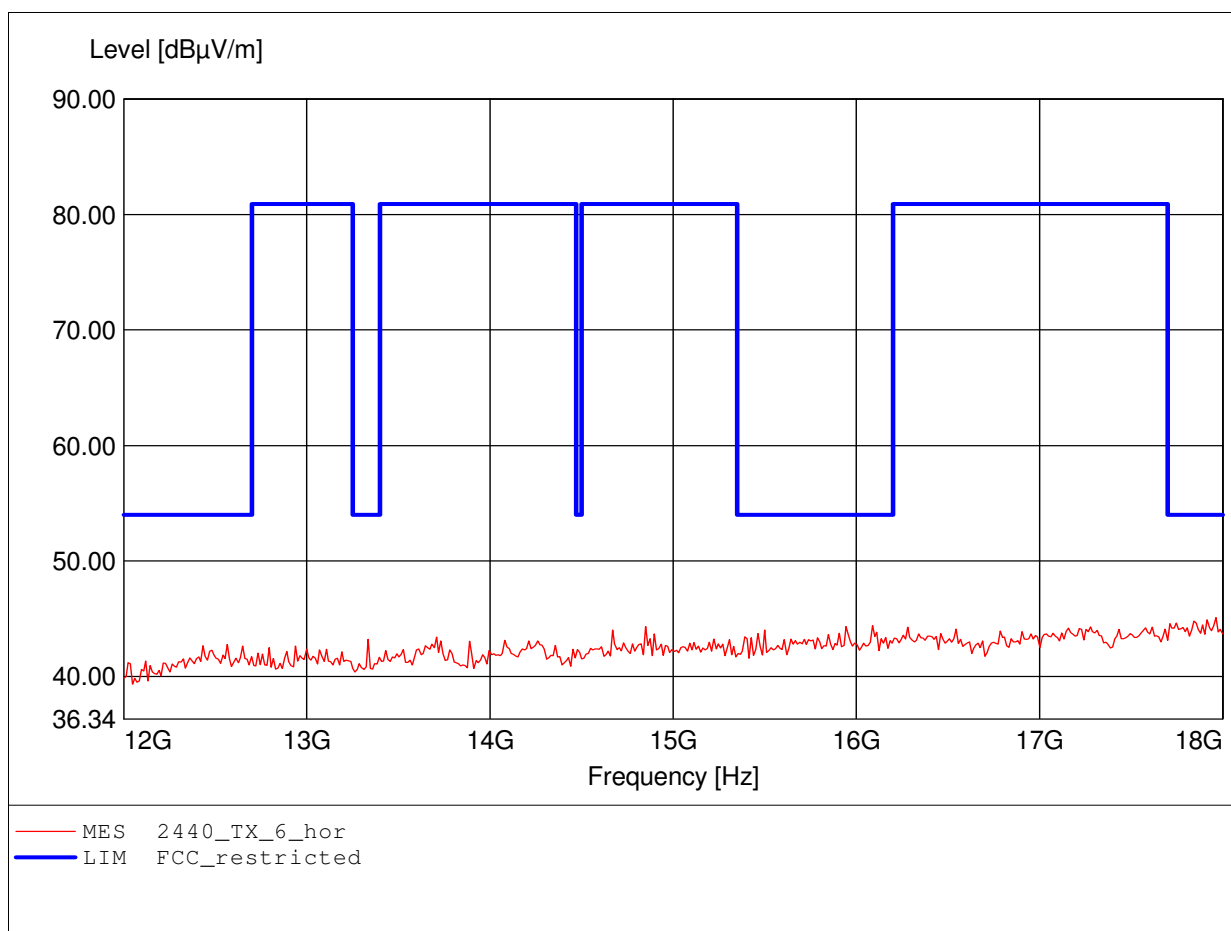
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 11.880GHz, Emax: 43.64dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

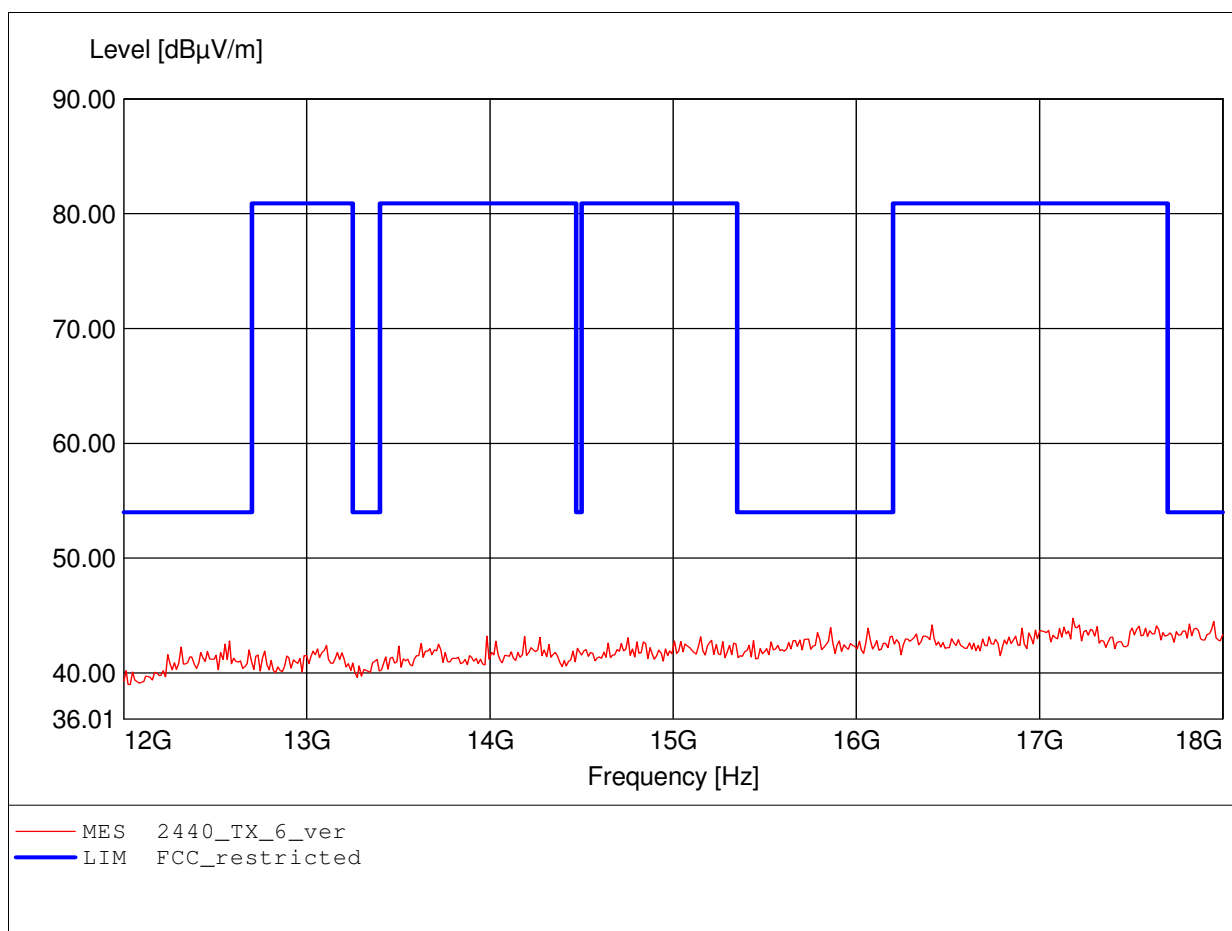
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 17.964GHz, Emax: 45.11dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

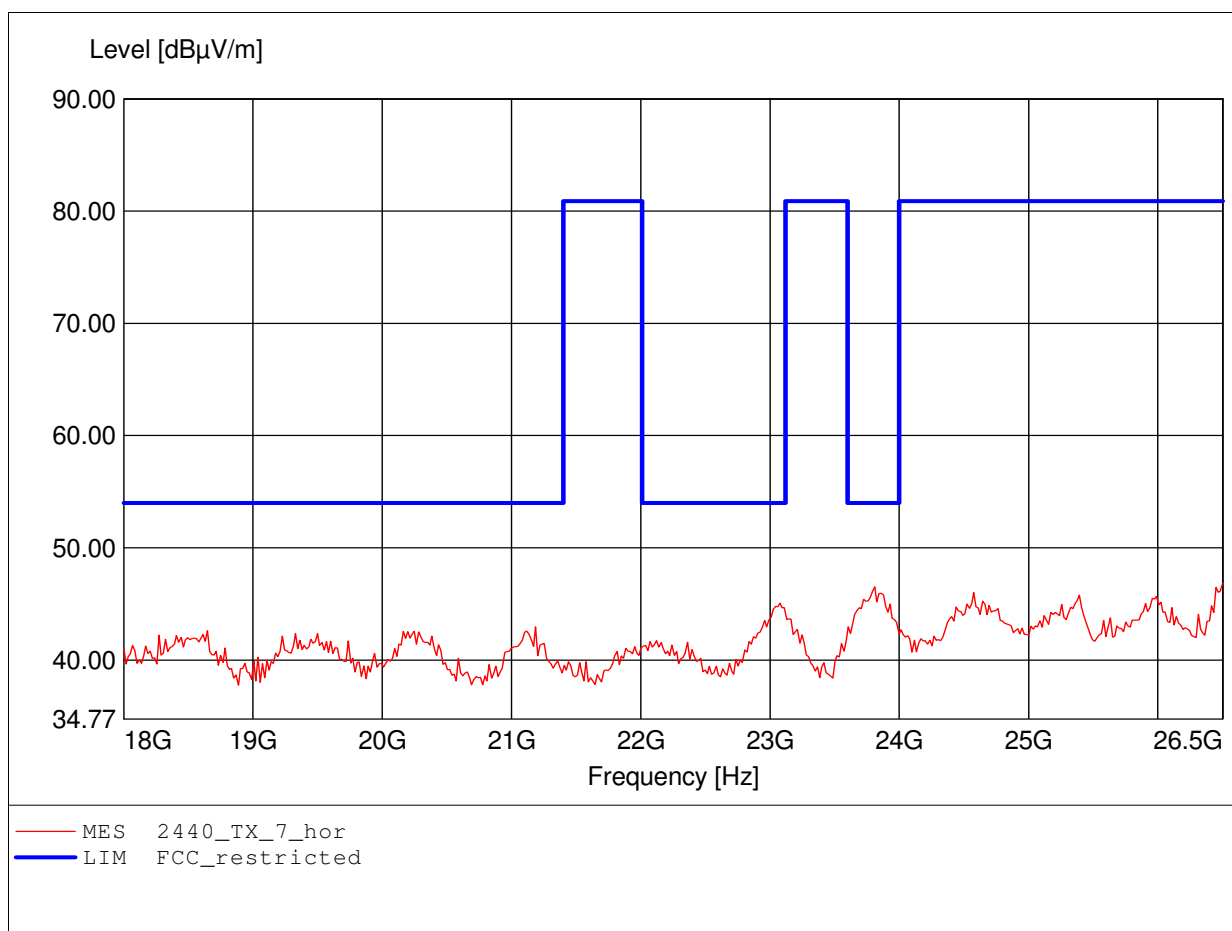
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL 025, ampl.+HP.
Comment 2: Freq: 17.182GHz, Emax: 44.77dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

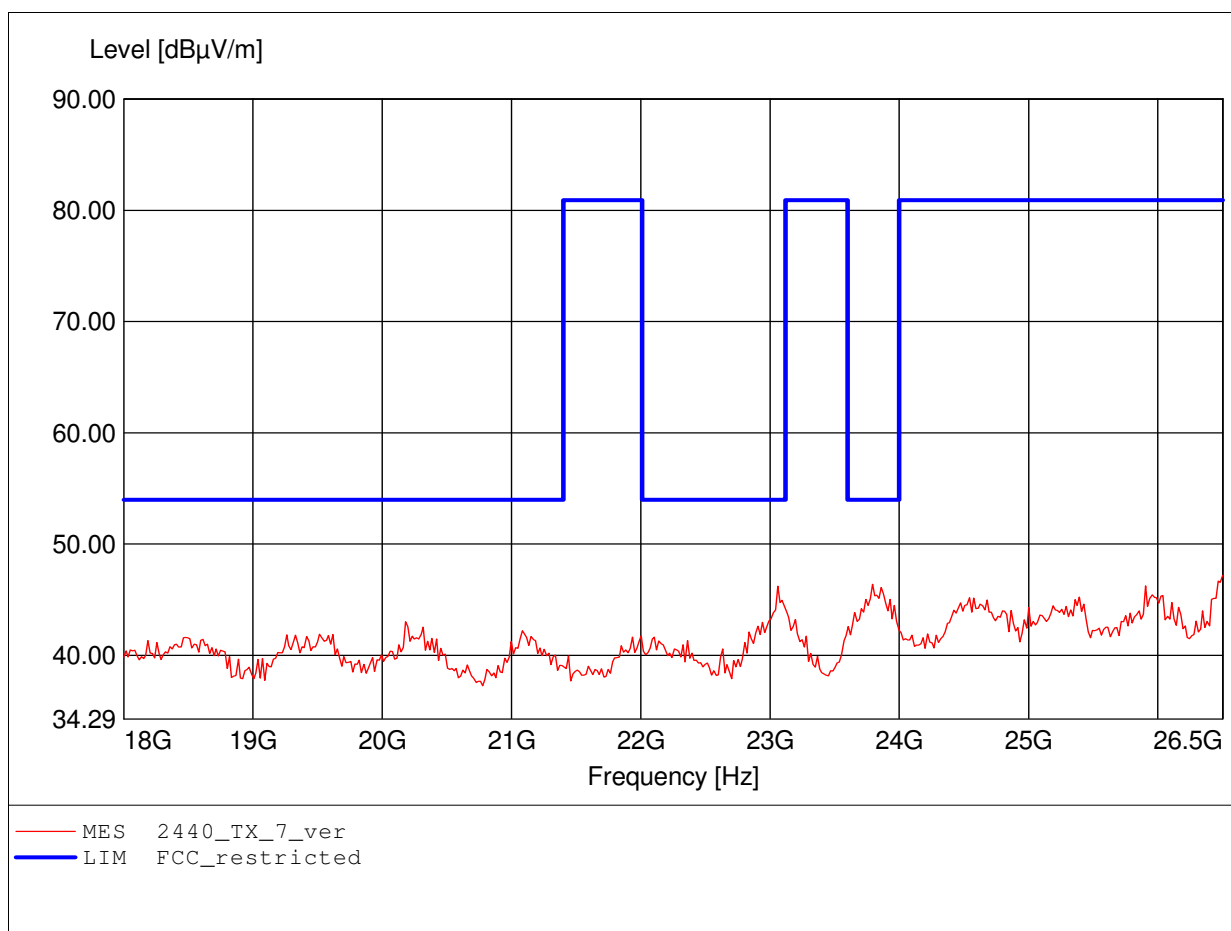
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq: 26.500GHz, Emax: 46.88dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

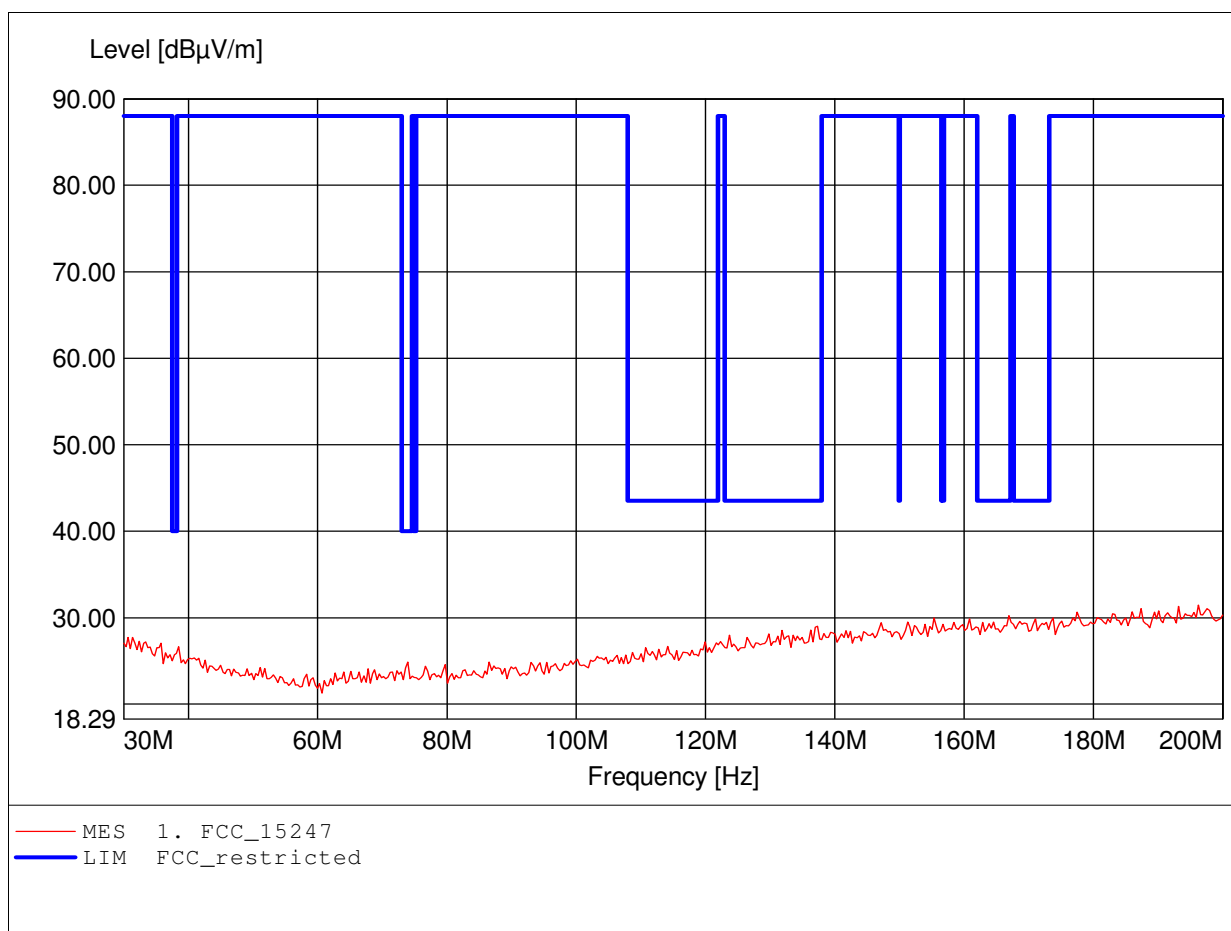
Approval Holder: KONDO KAGAKU CO., LTD. / G0M-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Pudell
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: Freq. / CH: 2440
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq: 26.500GHz, Emax: 47.19dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

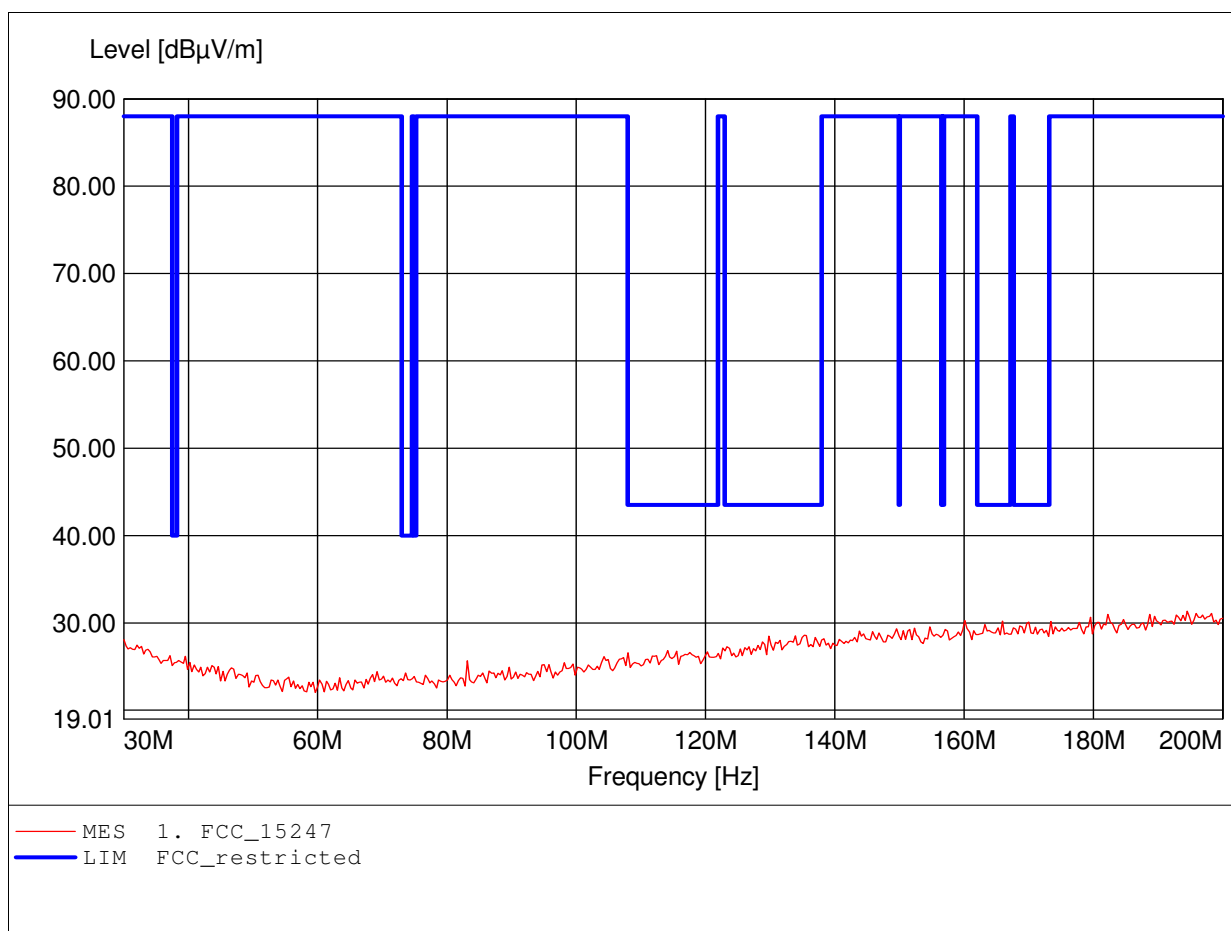
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 196.253MHz, Emax: 31.45dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

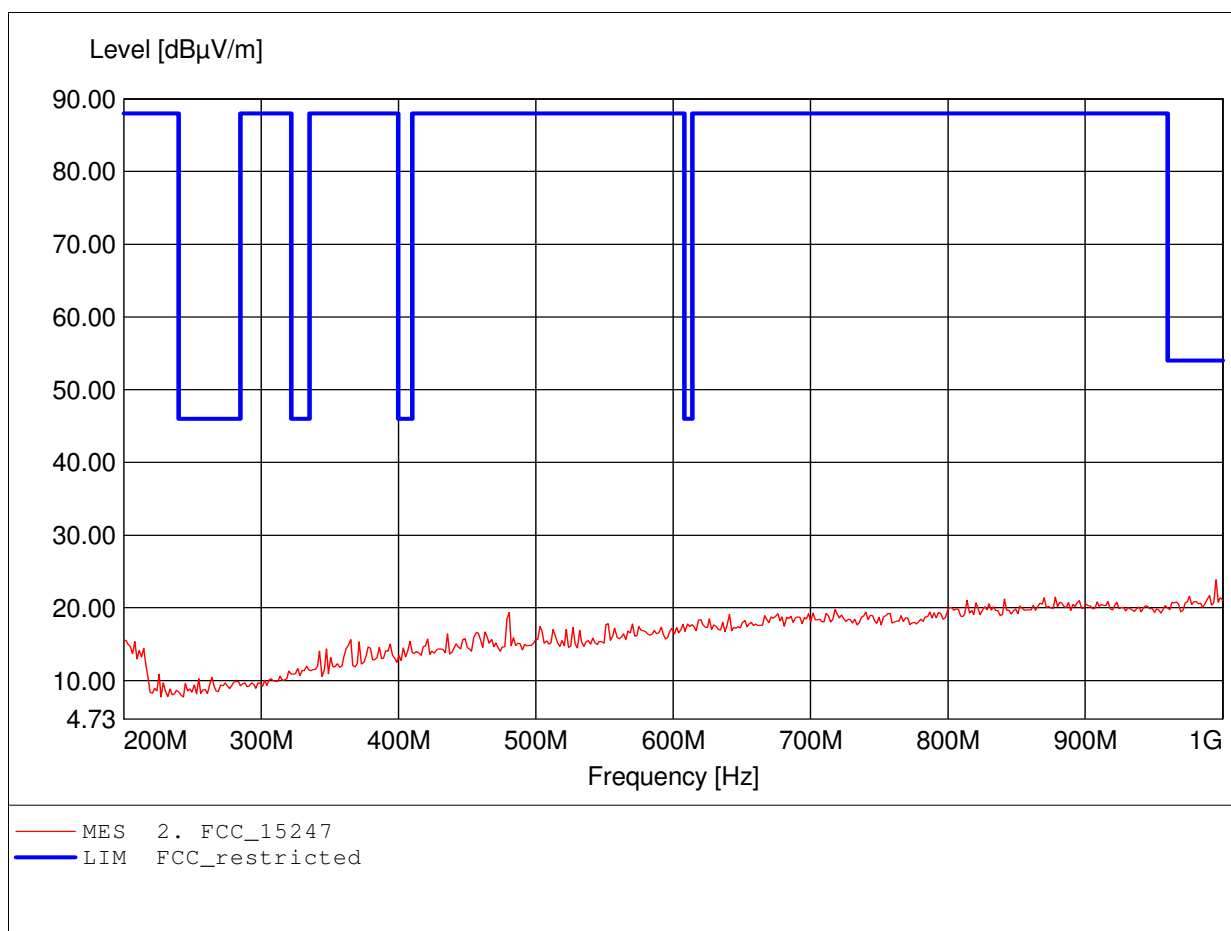
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 194.549MHz, Emax: 31.33dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

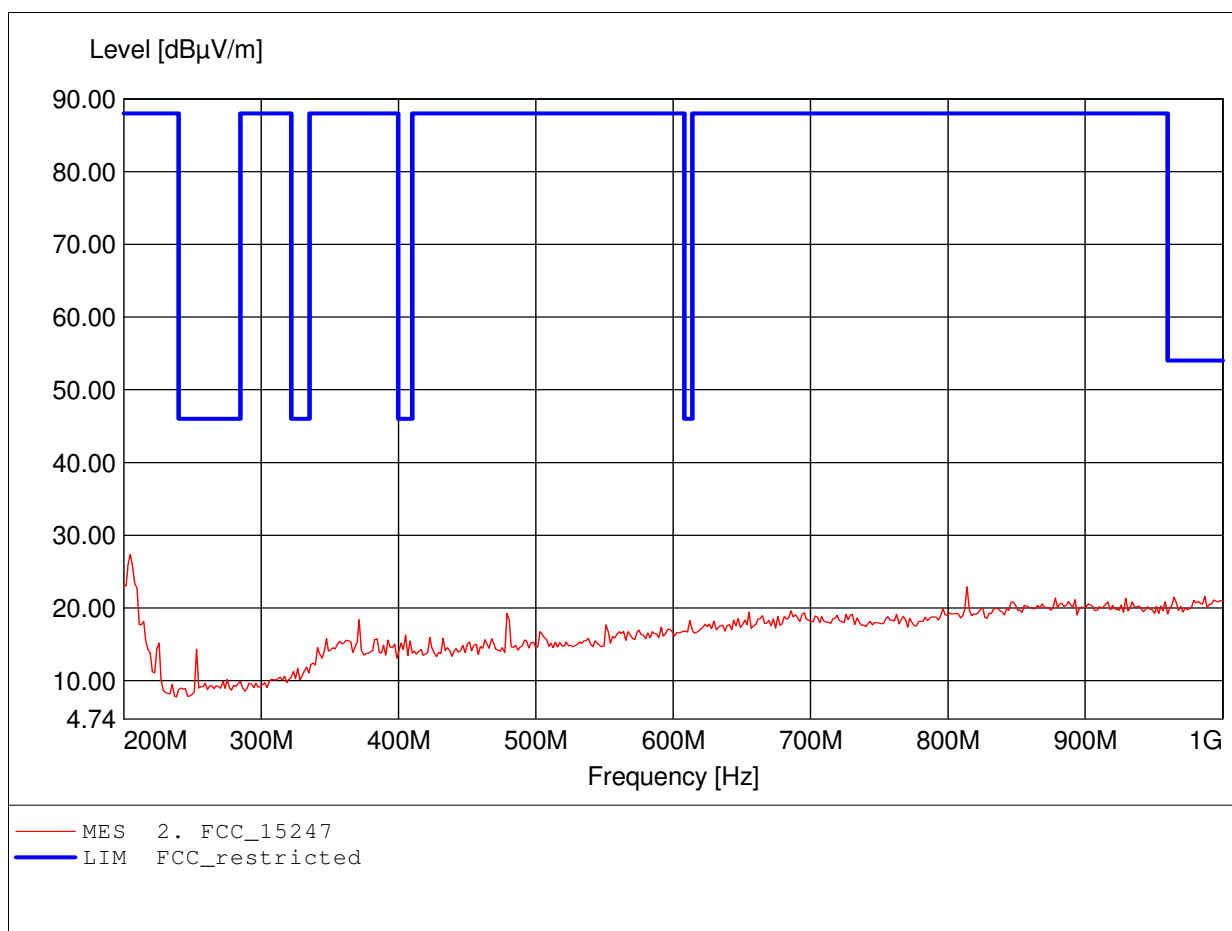
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 995.190MHz, Emax: 23.87dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

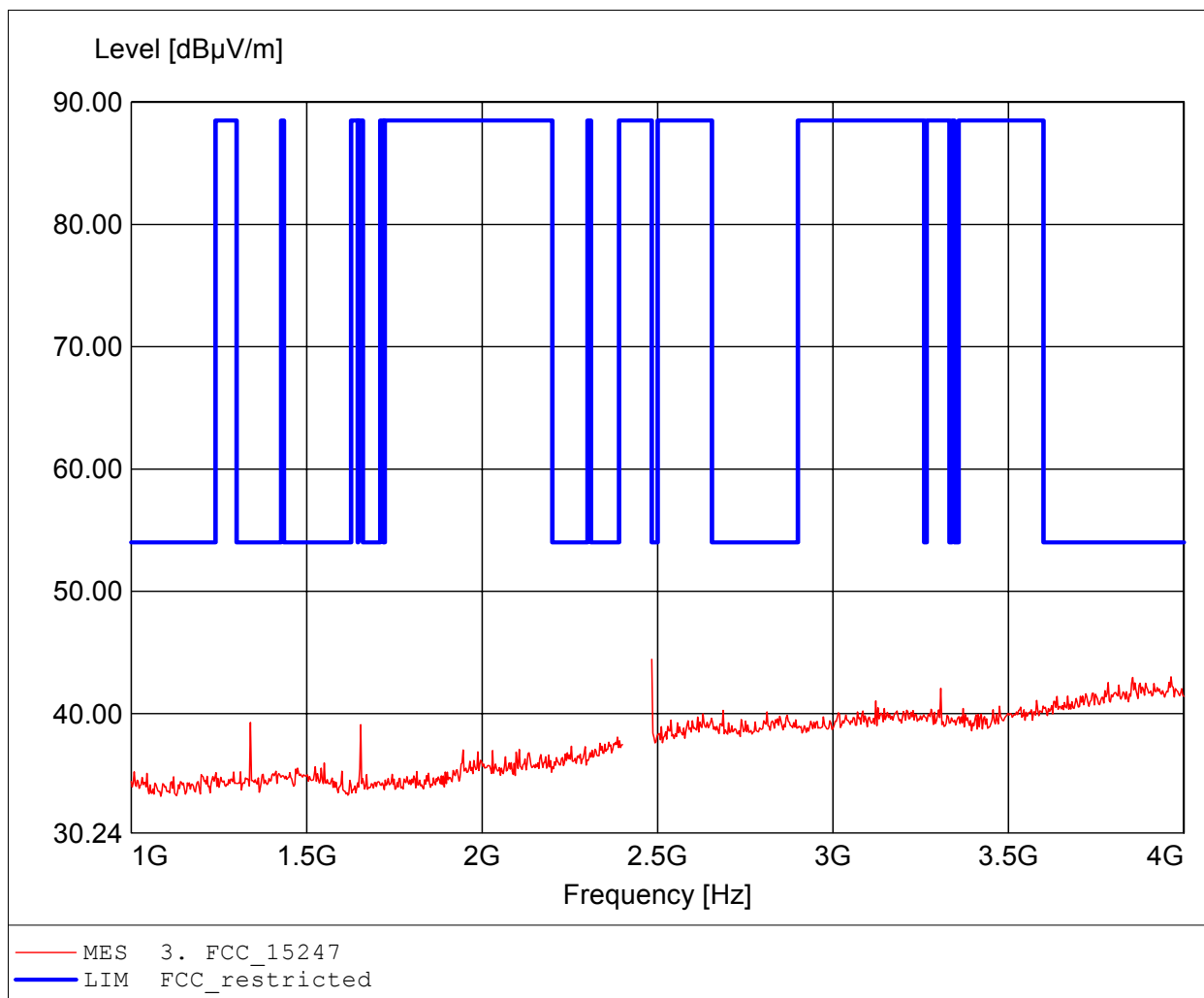
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 204.810MHz, Emax: 27.39dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

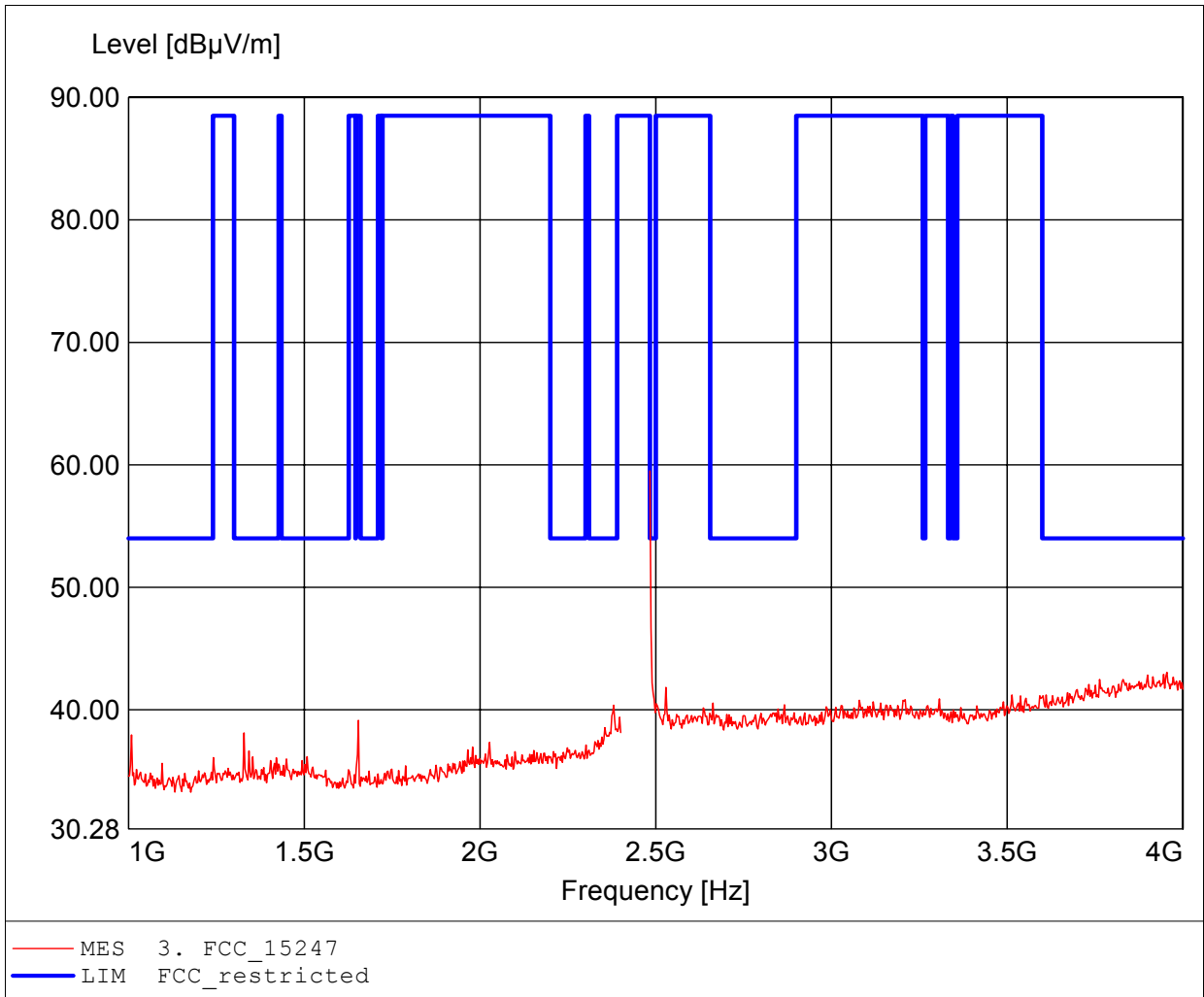
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 2.484GHz, Emax: 44.44dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

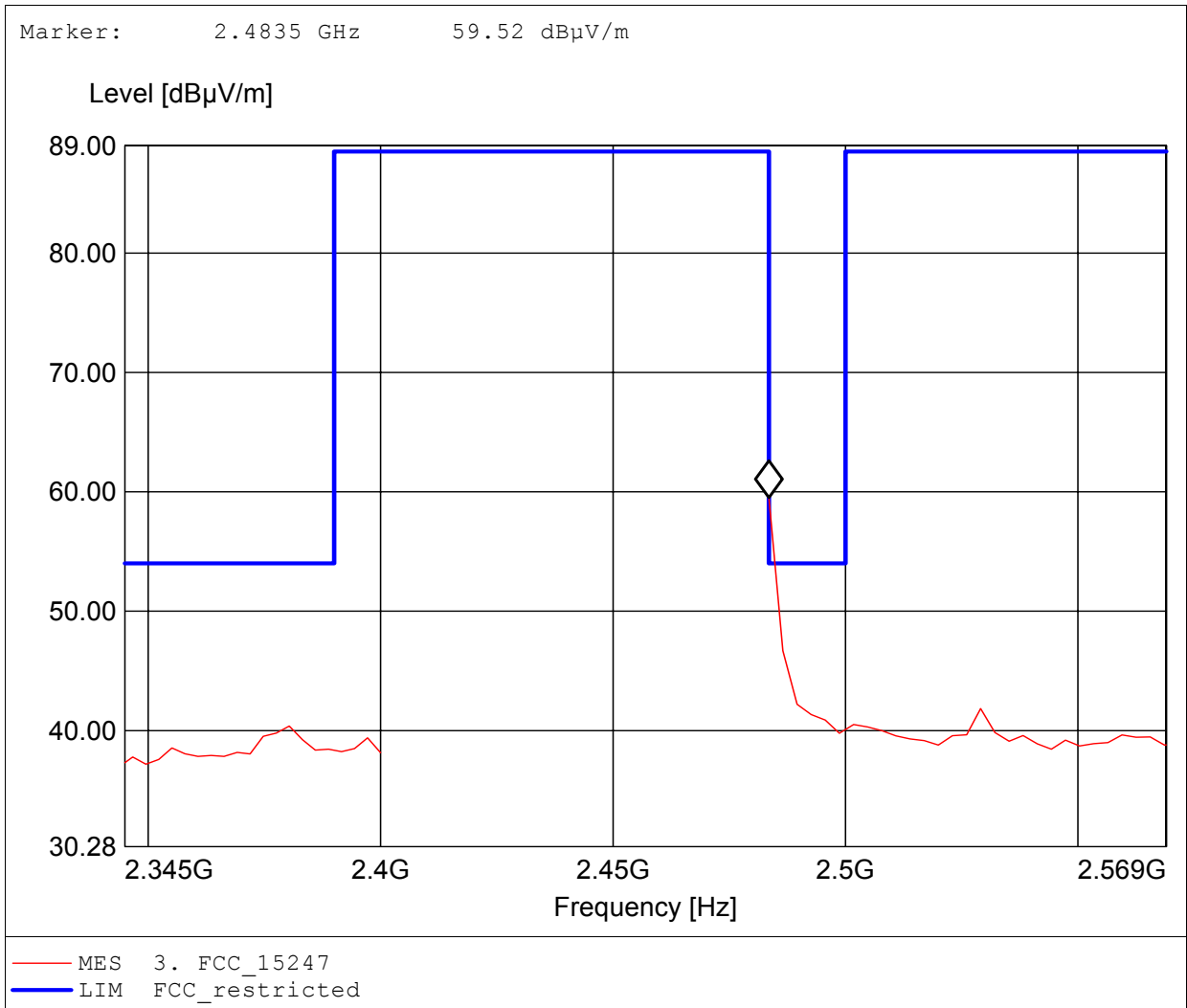
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 2.484GHz, Emax: 59.52dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

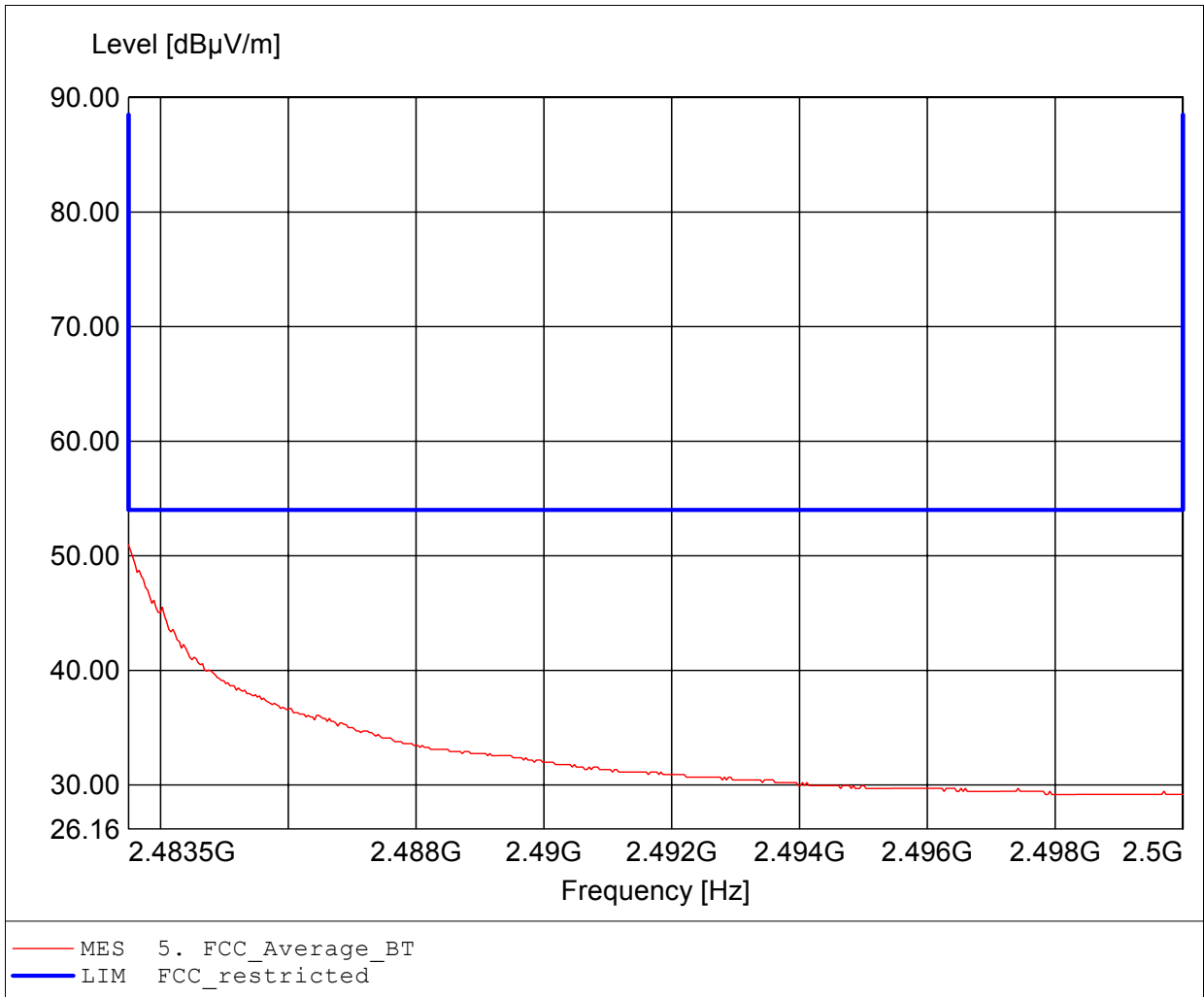
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 2.484GHz, Emax: 59.52dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

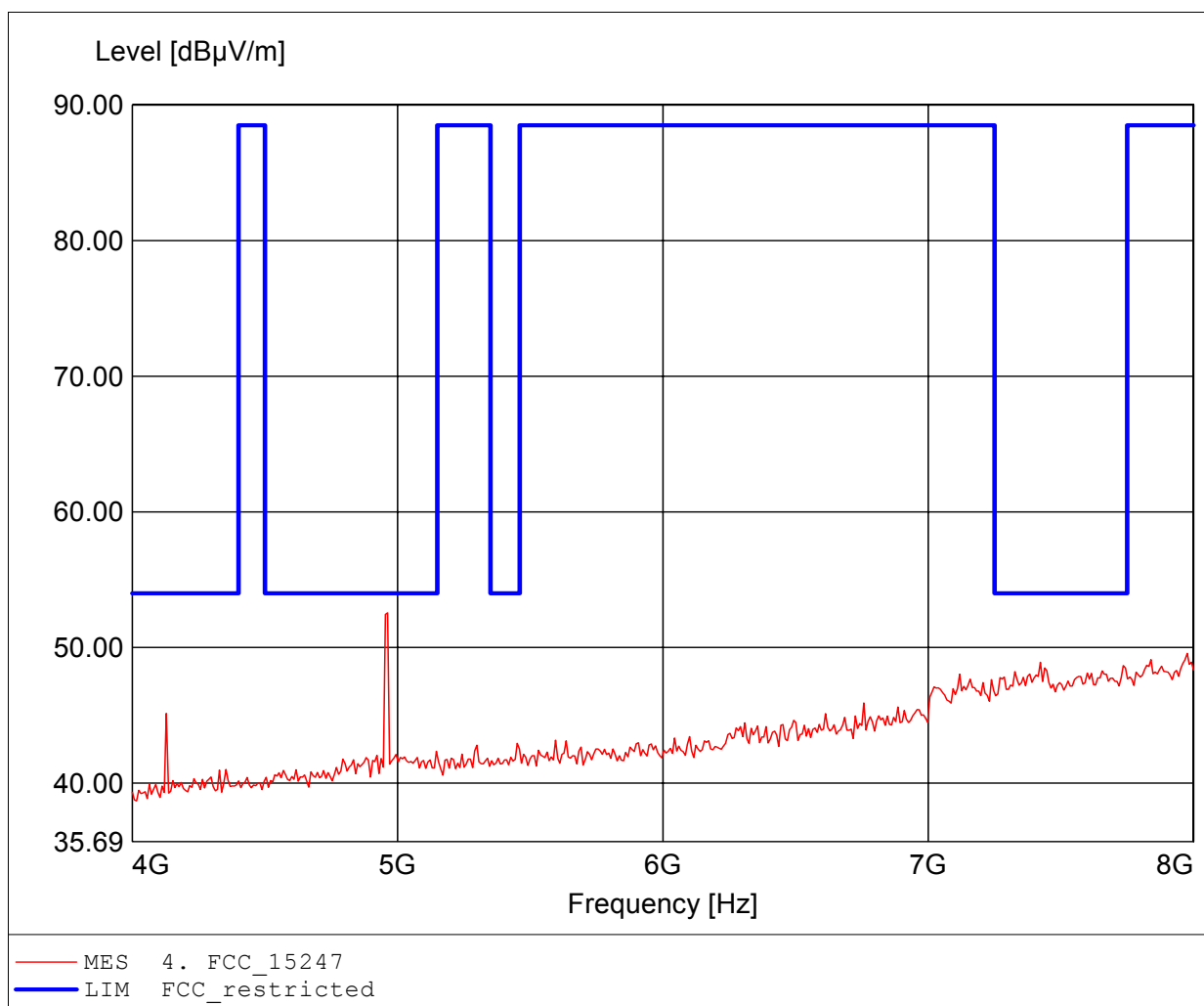
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, average detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 2.484GHz, Emax: 50.94dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

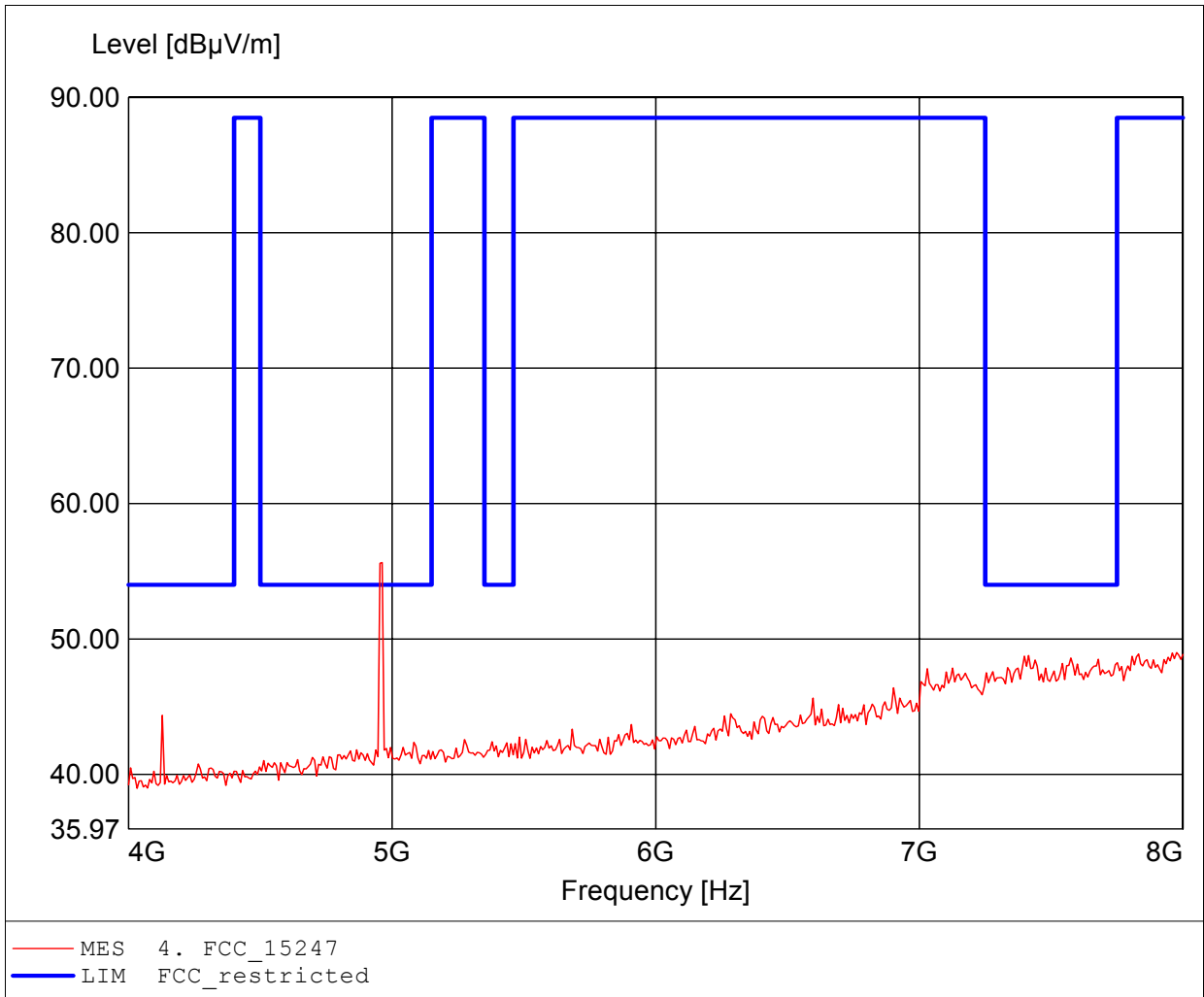
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 4.962GHz, Emax: 52.56dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

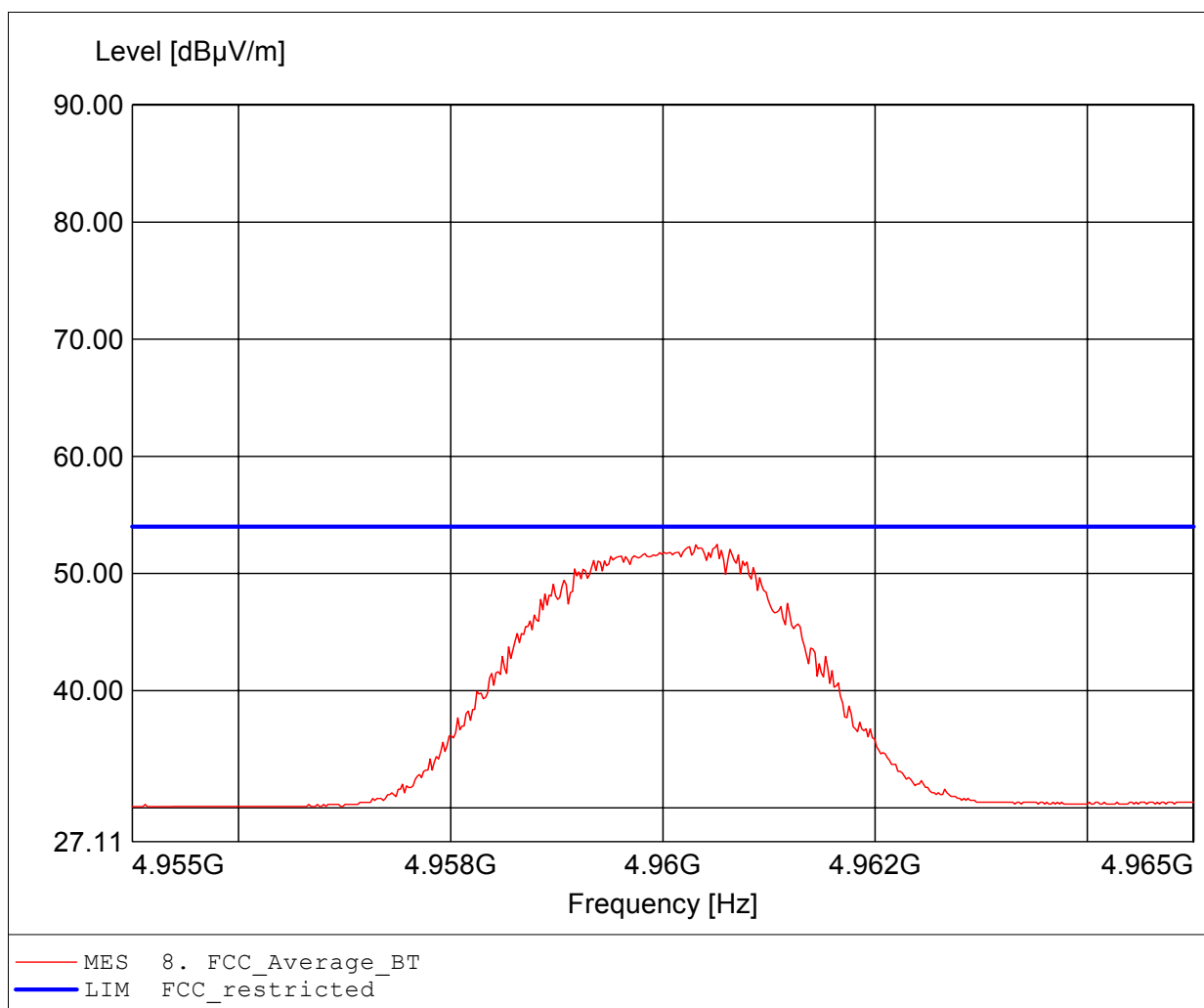
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 4.962GHz, Emax: 55.64dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

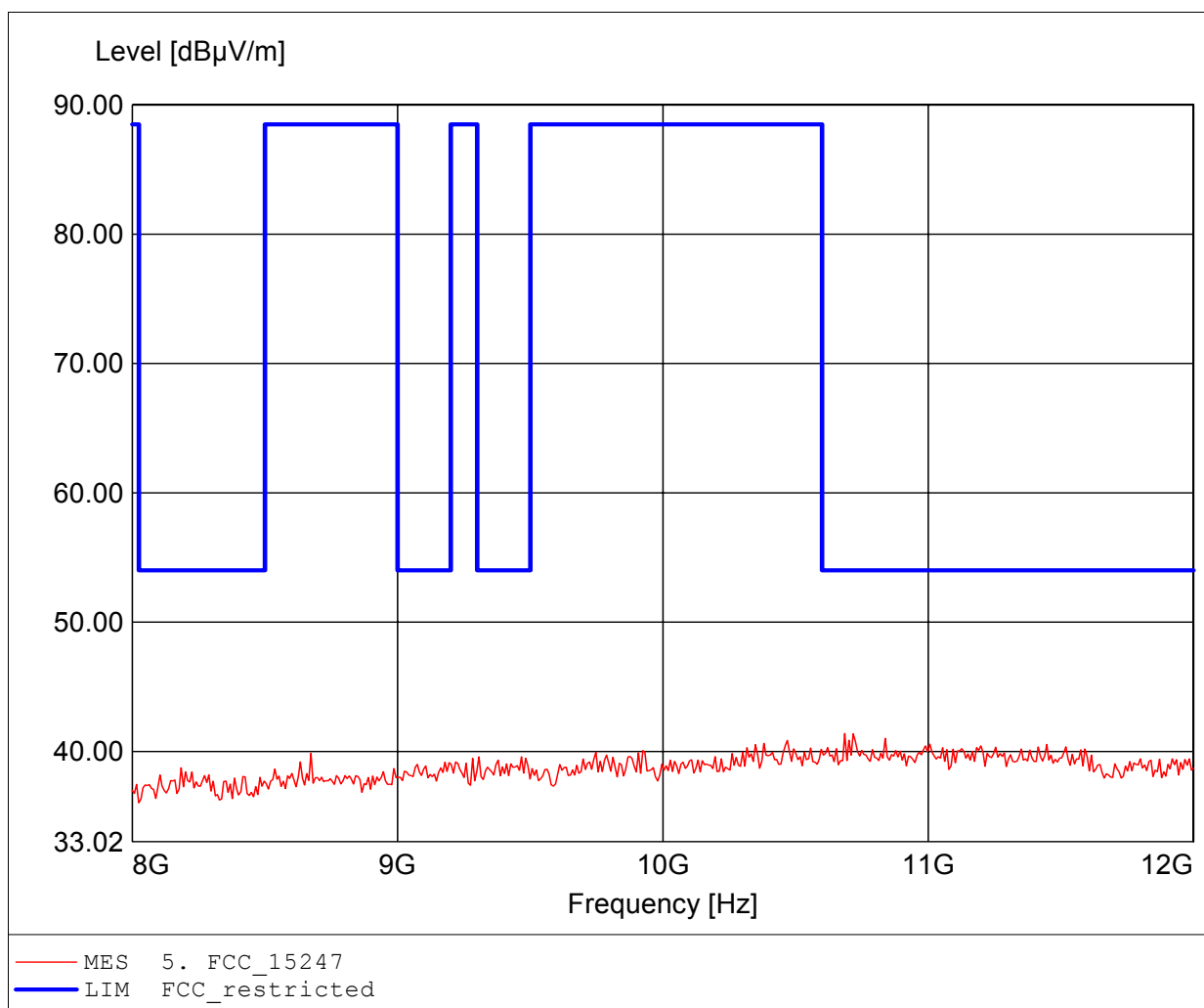
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, average detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 4.961GHz, Emax: 52.48dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

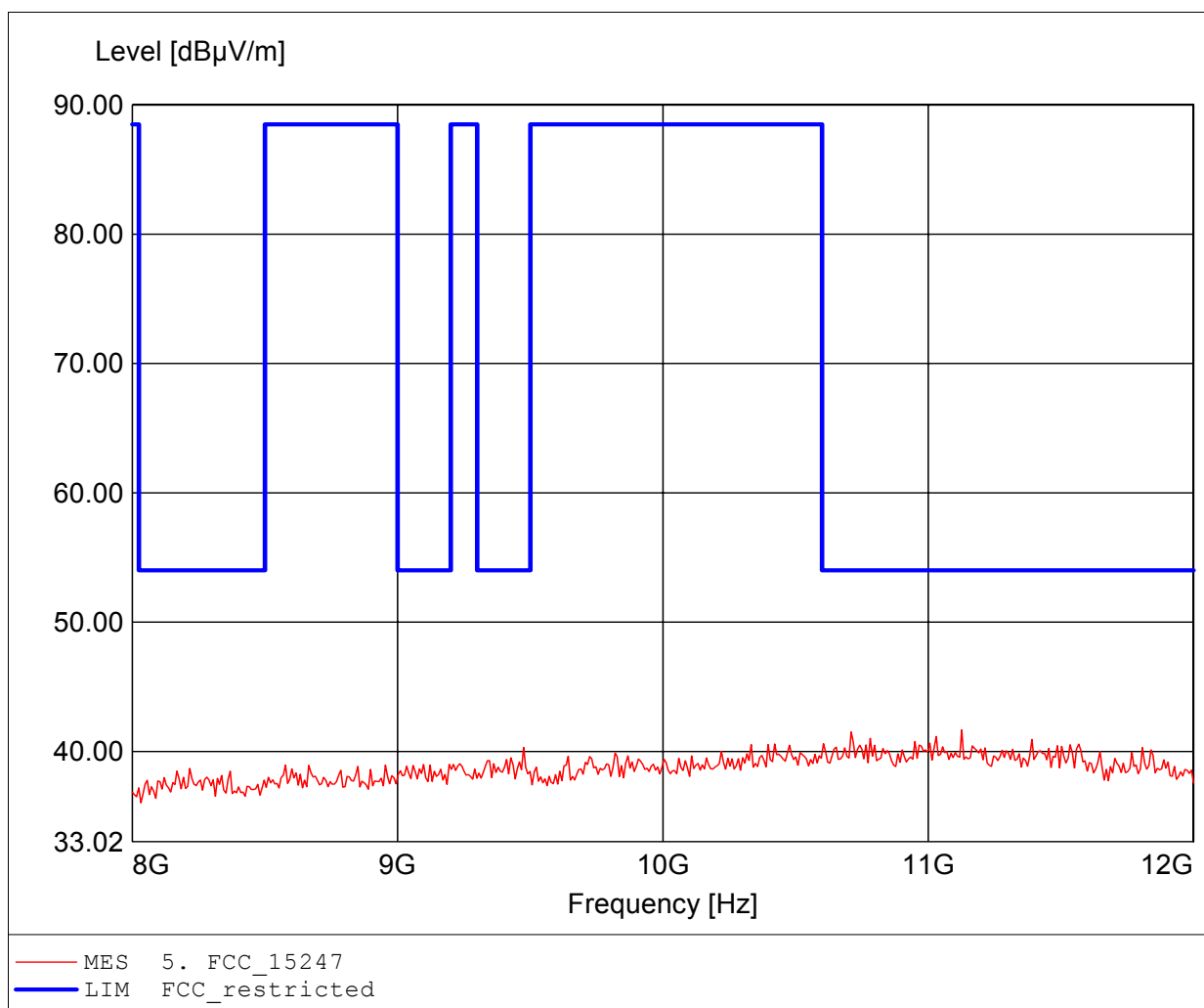
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 10.685GHz, Emax: 41.39dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

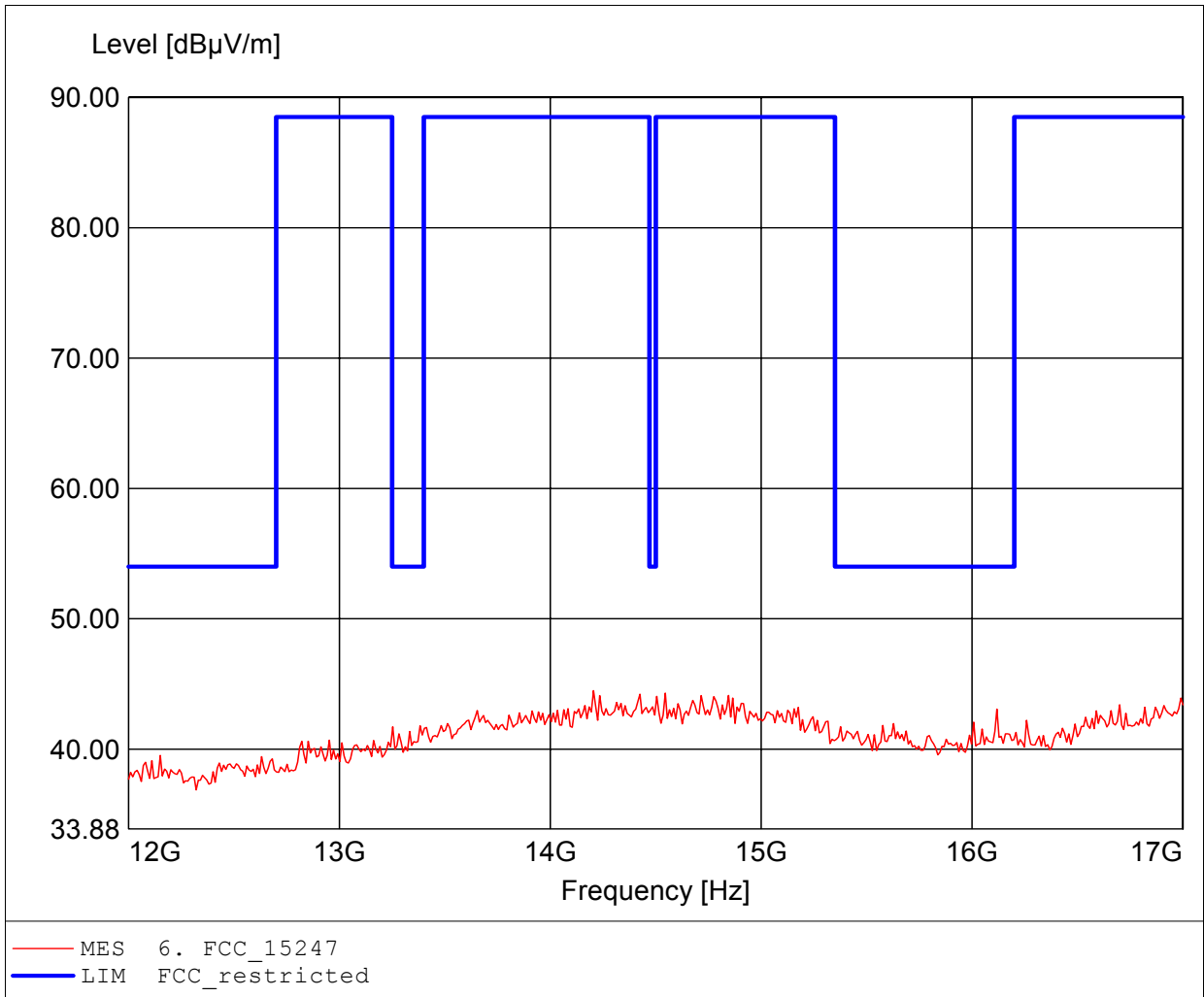
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 11.126GHz, Emax: 41.66dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

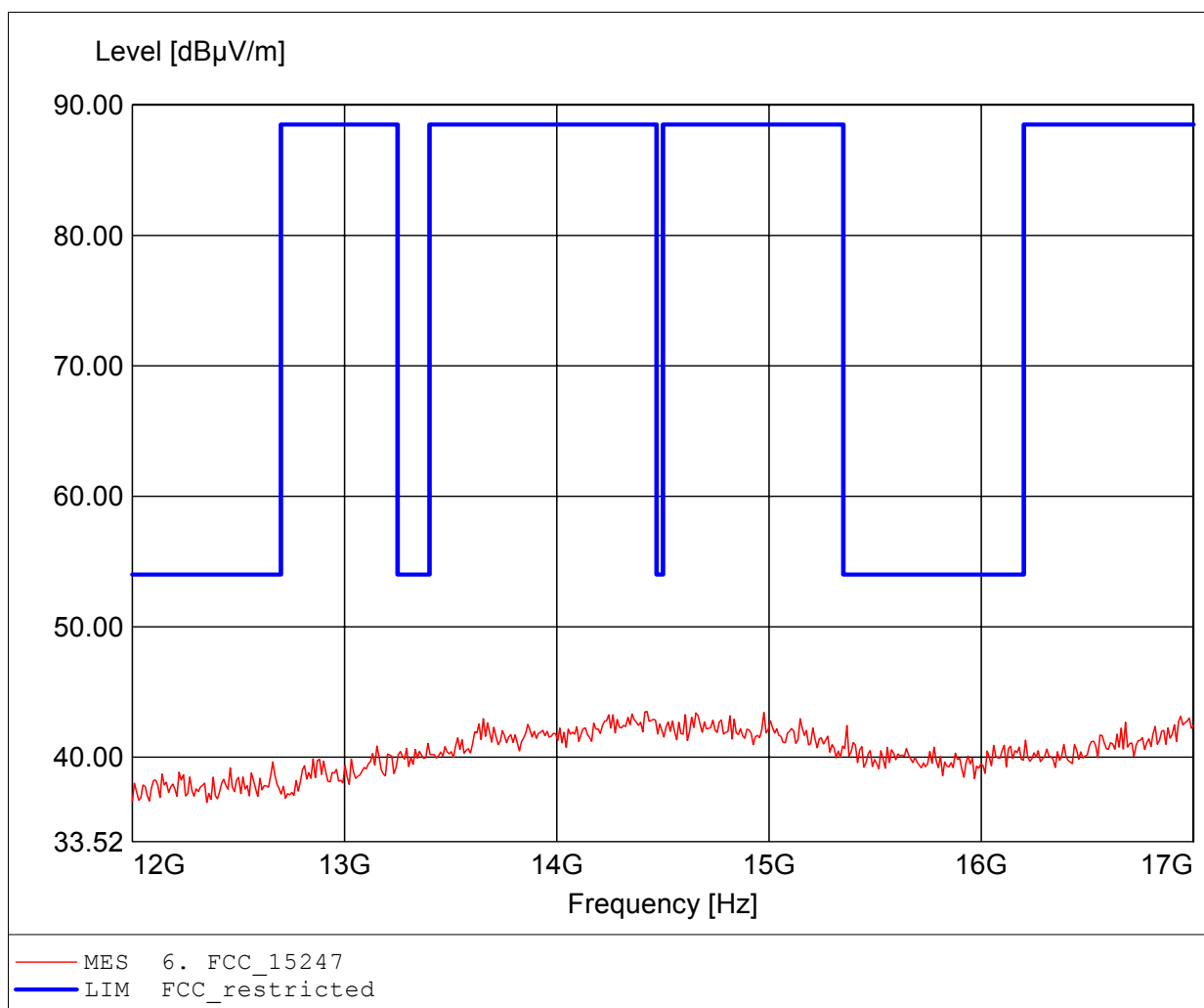
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 14.204GHz, Emax: 44.49dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

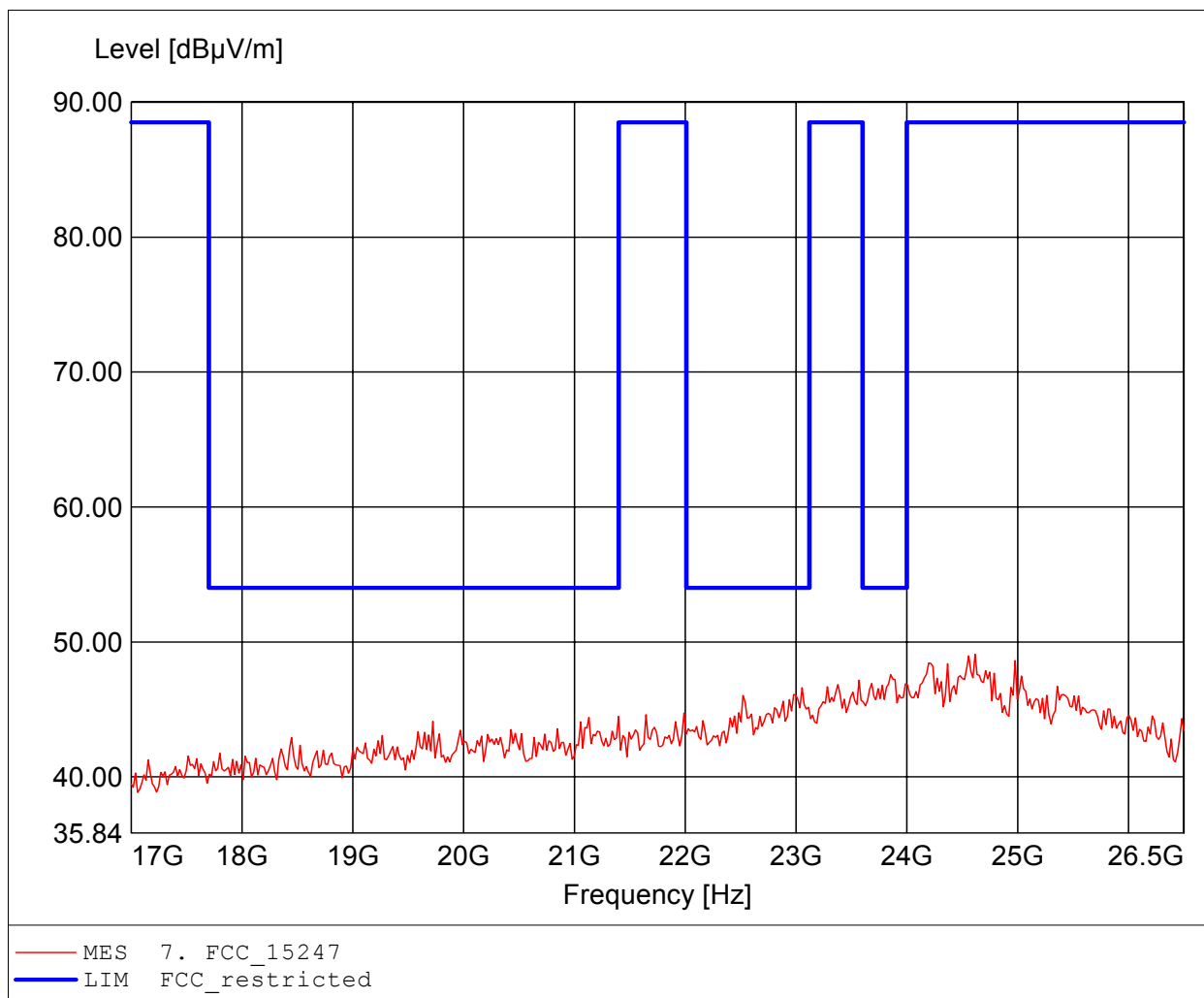
Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 14.425GHz, Emax: 43.50dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq: 24.615GHz, Emax: 49.08dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder: KONDO KAGAKU CO., LTD. / GOM-1112-1639
EUT / Model: RC transmitter for car model / EX-1
Setup: 2.4 GHz FHSS / simplex / Pmax / ANTB18-155A0 vertical
Test site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Vnom.: 6.0V DC (4x AAA battery)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq: 24.196GHz, Emax: 49.21dBuV/m, RBW: 1MHz

