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NIKKO TOYS LIMITED

TEST REPORT

SCOPE OF WORK
FCC TESTING– MODEL: 10790(10791)

REPORTNUMBER
GZHH00644398-005

ISSUE DATE
JUNE 27, 2026

PAGES
32

DOCUMENT CONTROL NUMBER
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NIKKO TOYS LIMITED

Application for Certification

FCC ID: 2AS9M10790NIKCOL

1:18th BIGFOOT Traditional RC 18.5cm (7.2" / 18cm)
Additional names: 1:18th BIGFOOT Traditional RC 18.5cm Style TBD (7.2" / 18cm)

Model: 10790(10791)

2.4GHz Transceiver

Report No.: GZHH00644398-005

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-24]

Prepared and Checked by:

Maura Wang
Engineer

Approved by:

Johnny Wang
Project Engineer
Date: June 27, 2026

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MEASUREMENT/TECHNICAL REPORT

This report concerns (check one:) Original Grant X Class II Change _____

Equipment Type: DXX - Part 15 Low Power Communication Device Transmitter

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Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes _____ No __X__

If yes, defer until: _____
date

Company Name agrees to notify the Commission by: _____
date
of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? Yes _____ No __X__

If no, assumed Part 15, Subpart C for intentional radiator – the new 47 CFR [10-1-24 Edition] provision.

Report prepared by:

Maura Wang
Intertek Testing Services Shenzhen Ltd. Longhua Branch
101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community GuanHu Subdistrict, LongHua District, Shenzhen, People's Republic of China
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Table of Contents

1.0 Summary of Test Result 4

2.0 General Description 5

2.1Product Description 5
2.2Related Submittal(s) Grants 5
2.3Test Methodology 5
2.4Test Facility 5

3.0System Test Configuration 6

3.1 Justification 6
3.2EUT Exercising Software 6
3.3Special Accessories 6
3.4Equipment Modification 6
3.5Measurement Uncertainty 7
3.6Support Equipment List and Description 7

4.0Emission Results 8

4.1 Radiated Test Results 8
4.1.1Field Strength Calculation 8
4.1.2Radiated Emission Configuration Photograph 9
4.1.3Radiated Emissions 9
4.1.4Transmitter Spurious Emissions 13

5.0Equipment Photographs 23

6.0Product Labelling 23

7.0Technical Specifications 23

8.0Instruction Manual 23

9.0Miscellaneous Information 24

9.1Bandedge Plot 24
9.220dB Bandwidth 26
9.3Discussion of Pulse Desensitization 27
9.4Calculation of Average Factor 27
9.5Emissions Test Procedures 30

10.0Test Equipment List 32

1.0 Summary of Test Result

Applicant: NIKKO TOYS LIMITED
Applicant Address: UNIT 1220, 12/F., PENINSULA CENTRE, 67 MODY ROAD, TSIM SHA TSUI EAST, KOWLOON, HONGKONG

MODEL:10790(10791)

FCC ID: 2AS9M10790NIKCOL

Test Specification	Reference	Results
Transmitter Radiated Emission Bandedge	15.249 &15.209 &15.205	Pass
20dB Bandwidth	15.215(c)	Pass

Notes: The EUT uses an Integral Antenna which in accordance to Section 15.203 is considered sufficient to comply with the provisions of this section.

2.0 General Description

2.1 Product Description

The equipment under test (EUT) is a 1:18th BIGFOOT Traditional RC 18.5cm (7.2" / 18cm) operating at 2.4G Band. The EUT can be powered by DC 3.0V (2 x 1.5V AAA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna
Modulation Type: GFSK
Antenna Gain: 0dBi
Channel List:
2405MHz to 2475MHz and the channel list with 1 MHz channel spacing.

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

2.2 Related Submittal(s) Grants

This is an application for certification of controller unit for the 1:18th BIGFOOT Traditional RC 18.5cm (7.2" / 18cm), and the corresponding car unit which associated with this EUT is subjected to FCC certification with FCC ID: 2AS9M10790NIK-TX and FCC SDOC.

2.3 Test Methodology

Radiated emission measurements were performed according to the procedures in ANSI C63.10 (2020). Radiated emission measurement was performed in Semi-anechoic chamber. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

2.4 Test Facility

The Semi-anechoic chamber used to collect the radiated data is **Intertek Testing Services Shenzhen Ltd. Longhua Branch**and located at101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community GuanHu Subdistrict, LongHua District, Shenzhen, People's Republic of China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: CN1188).

3.0 System Test Configuration

3.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.10 (2020).

The EUT was powered by DC 3.0V (2 x 1.5V AAA batteries) during the test, only the worst data was reported in this report.

For maximizing emissions below 30 MHz, the EUT was rotated through 360°, the bottom of the loop antenna was placed 1 meter above the ground, and the antenna polarization was changed. For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Section4.

The EUT was operated standalone and placed in the central of the turntable.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on a turn table, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

3.2 EUT Exercising Software

The EUT exercise program (provided by client) used during testing was designed to exercise the various system components in a manner similar to a typical use. The software Version: HS_HB02TX_EE29_V1.0

3.3 Special Accessories

No special accessories used.

3.4 Equipment Modification

Any modifications installed previous to testing by NIKKO TOYS LIMITED will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd Longhua Branch.

3.5 Measurement Uncertainty

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

Measurement Uncertainty	Uncertainty
20dB Bandwidth	±5%
Spurious emission (Above 18GHz)	±5.3dB
Spurious emission (6GHz to 18GHz)	±5.1dB
Spurious emission (1GHz to 6GHz)	±6.0dB
Radiated emission (Up to 1GHz)	±4.8dB
Temperature	±1°C
Humidity	±5%

3.6 Support Equipment List and Description

Description	Manufacturer	Model No.
//	//	//

4.0 Emission Results

Data is included worst-case configuration (the configuration which resulted in the highest emission levels).

4.1 Radiated Test Results

A sample calculation, configuration photographs and data tables of the emissions are included.

4.1.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

Where FS = Field Strength in dBµV/m
RA = Receiver Amplitude (including preamplifier) in dBµV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB/m
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD + AV

Assume a receiver reading of 62.0 dBµV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBµV/m. This value in dBµV/m was converted to its corresponding level in µV/m.

RA = 62.0 dBµV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB
AV = -10 dB
FS = 62 + 7.4 + 1.6 - 29 + 0 = 42 dBµV/m

Level in µV/m = Common Antilogarithm [(42 dBµV/m)/20] = 125.9 µV/m

4.1.2 Radiated Emission Configuration Photograph

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos. pdf.

4.1.3 Radiated Emissions

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Worst Case Radiated Emission
at
662.763333 MHz

Judgement: Passed by 12.7 dB

TEST PERSONNEL:

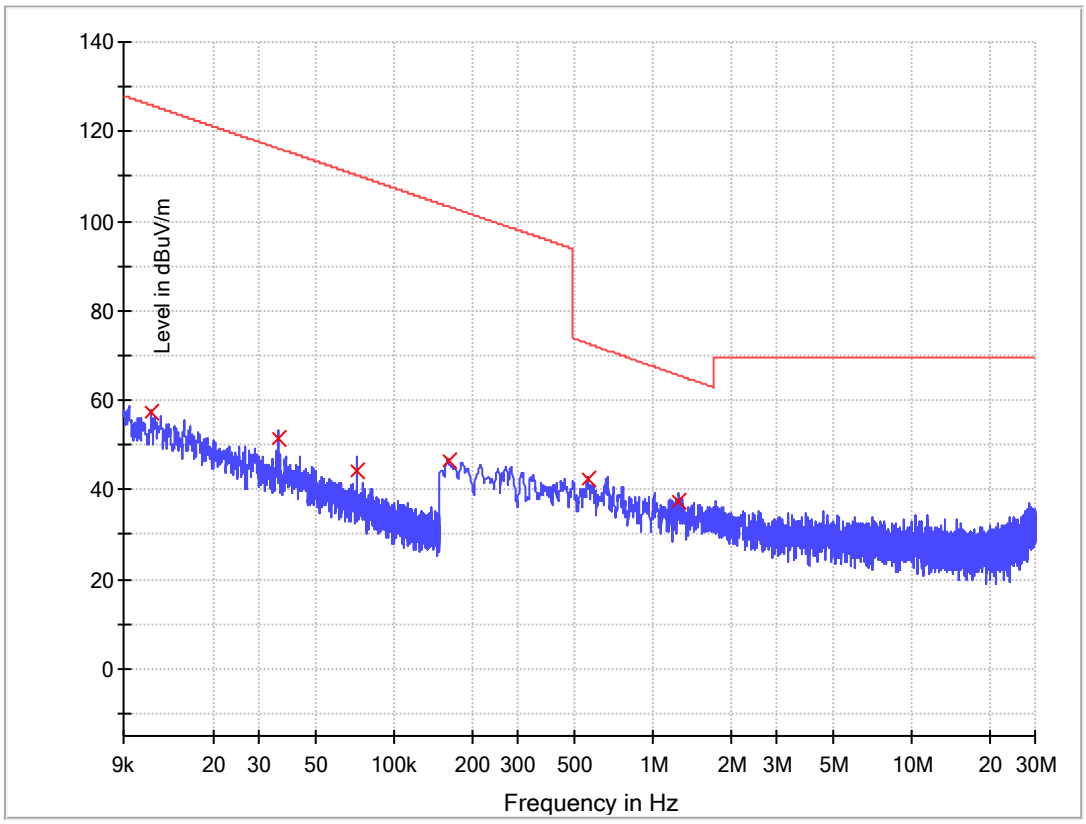
Sign on file

Maura Wang, Engineer
Typed/Printed Name

June 15, 2026 *Date*

Applicant: NIKKO TOYS LIMITED
Date of Test: June 15, 2026
Worst Case Operating Mode:

Model:10790**(10791)**
Transmitting(2405.000MHz)



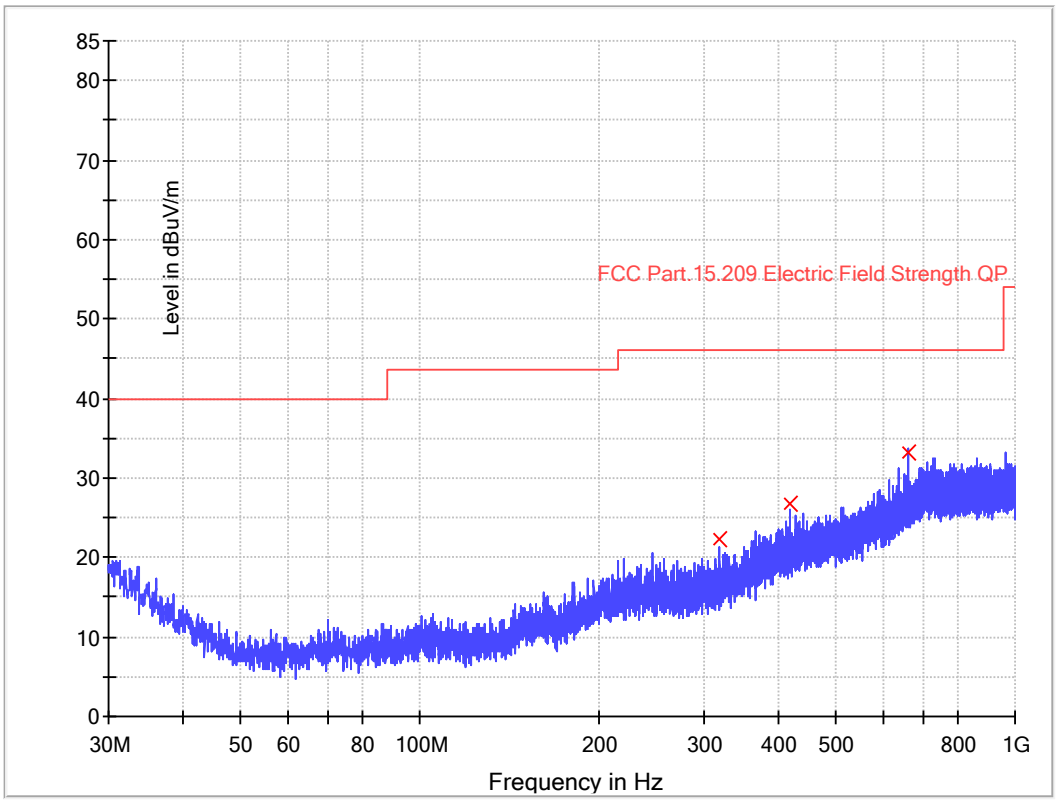
Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
0.011510	57.5	1000.0	120.000	20.3	68.4	125.9
0.035903	51.6	1000.0	120.000	18.1	64.6	116.2
0.071830	44.2	1000.0	120.000	17.7	66.0	110.2
0.161940	46.5	1000.0	120.000	17.1	56.8	103.3
0.559940	42.6	1000.0	120.000	17.0	30.0	72.6
1.261415	37.3	1000.0	120.000	15.8	28.2	65.5

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
3. Margin (dB) = Limit Line(dBµV/m) – Level (dBµV/m)

Applicant: NIKKO TOYS LIMITED
Date of Test: June 15, 2026
Worst Case Operating Mode:

Model:10790**(10791)**
Transmitting(2405.000MHz)

ANT Polarity: Horizontal



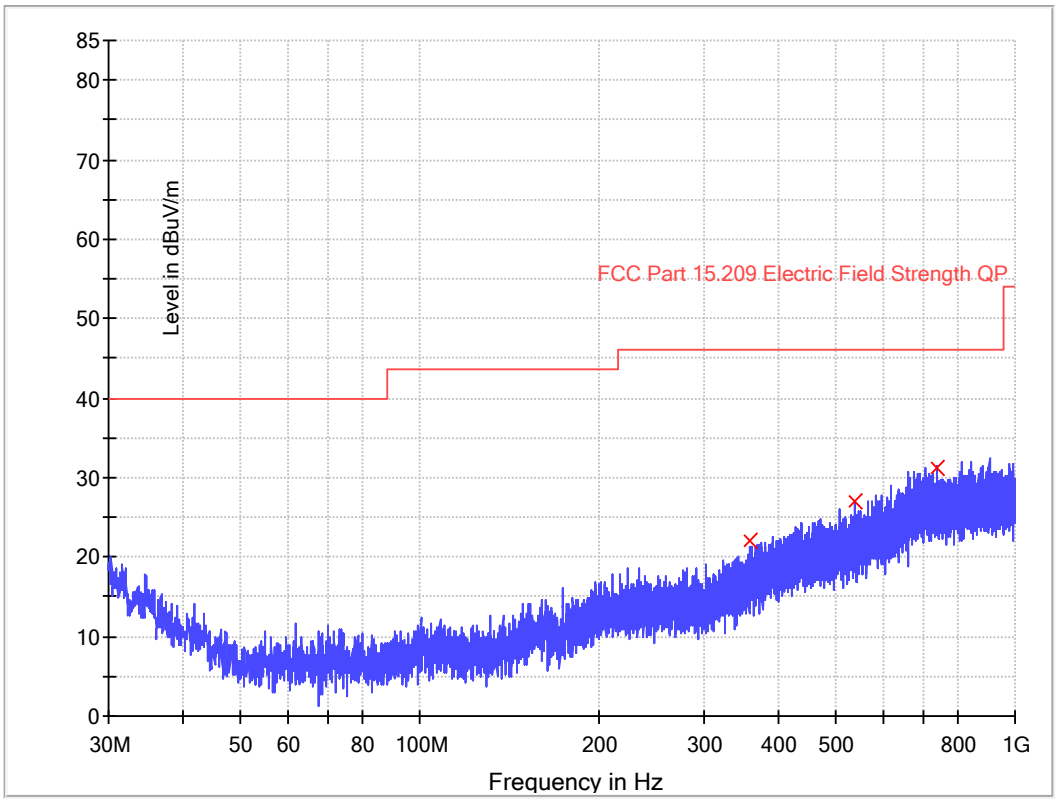
Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
319.092333	22.3	1000.0	120.000	H	21	23.7	46.0
417.256333	26.8	1000.0	120.000	H	25	19.2	46.0
662.763333	33.3	1000.0	120.000	H	30	12.7	46.0

Remark:
1. Corr.(dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
3. Margin (dB) = Limit Line(dBµV/m) – Level (dBµV/m)

Applicant: NIKKO TOYS LIMITED
Date of Test: June 15, 2026
Worst Case Operating Mode:

Model:10790**(10791)**
Transmitting(2405.000MHz)

ANT Polarity: Vertical



Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
357.278000	22.1	1000.0	120.000	V	23	23.9	46.0
536.663333	27.0	1000.0	120.000	V	27	19.0	46.0
739.943000	31.3	1000.0	120.000	V	32	14.7	46.0

Remark:
1. Corr.(dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Limit Line(dBμV/m) – Level (dBμV/m)

4.1.4 Transmitter Spurious Emissions (Radiated)

Worst Case Radiated Emission
at
9760.000 MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos. pdf.

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 2.3 dB

TEST PERSONNEL:

Sign on file

Maura Wang, Engineer
Typed/Printed Name

June 15, 2026 *Date*

Applicant: NIKKO TOYS LIMITED
Date of Test: June 15, 2026
Worst Case Operating Mode:

Model:10790**(10791)**
Transmitting

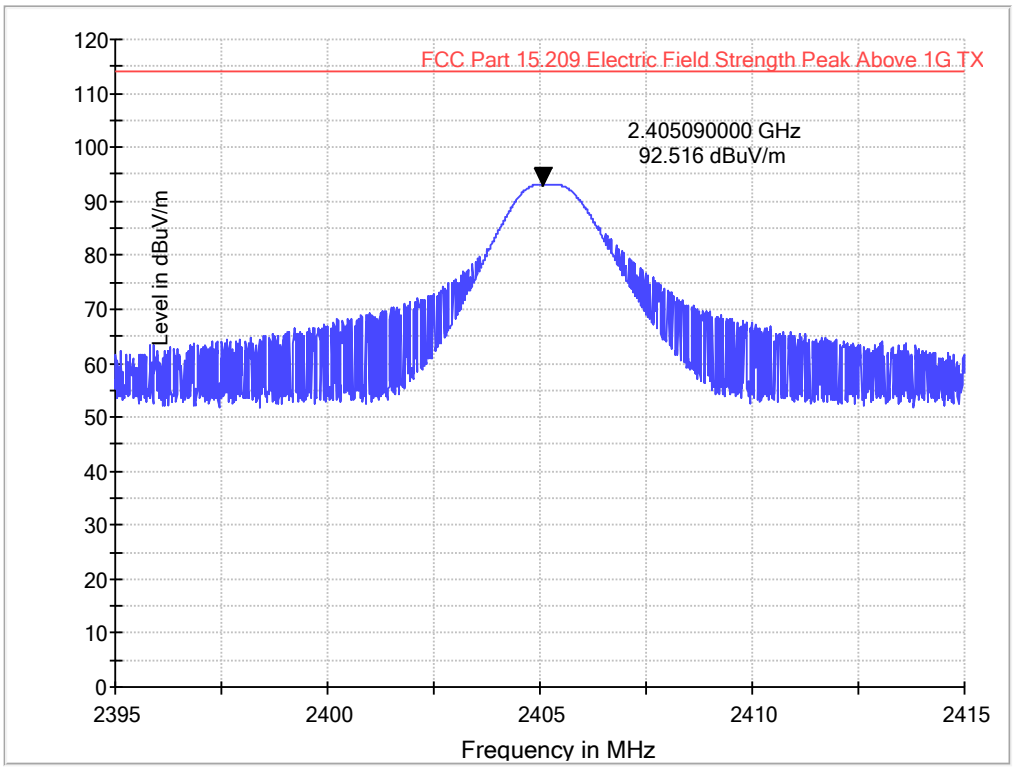
Table 1

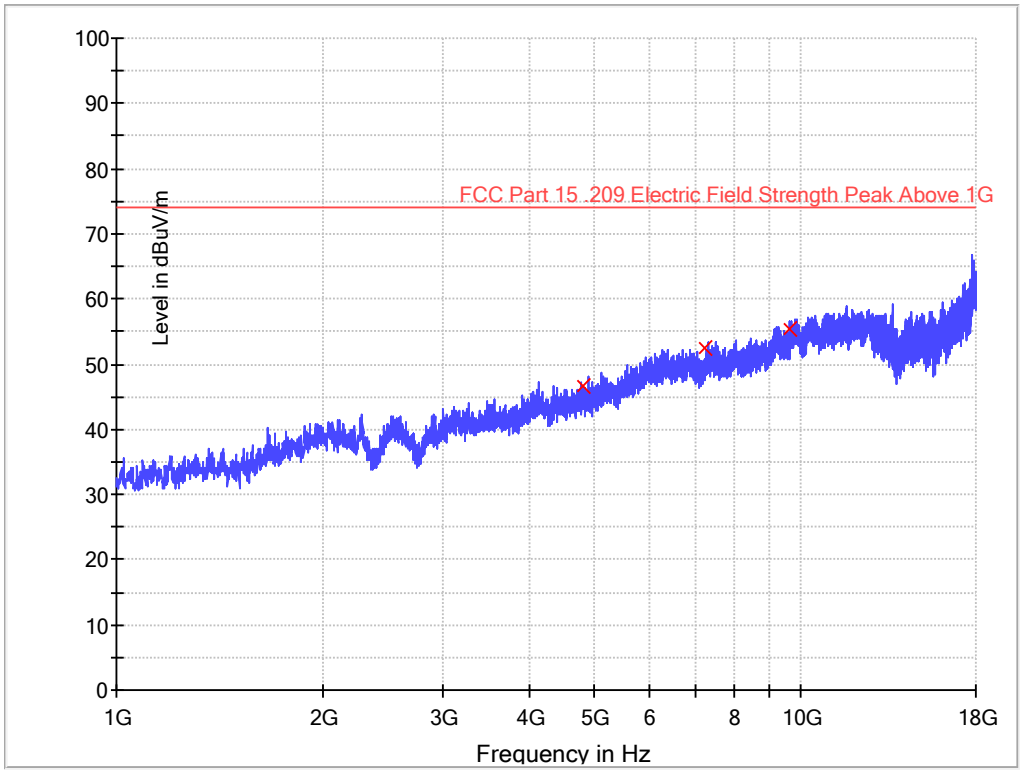
Radiated Emissions
(2405 MHz)

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2405.000	101.1	36.7	28.1	92.5	114.0	-21.5
Horizontal	4810.000	47.9	36.7	35.5	46.7	74.0	-27.3
Horizontal	7215.000	51.3	36.1	37.2	52.4	74.0	-21.6
Horizontal	9620.000	52.6	36.2	38.9	55.3	74.0	-18.7

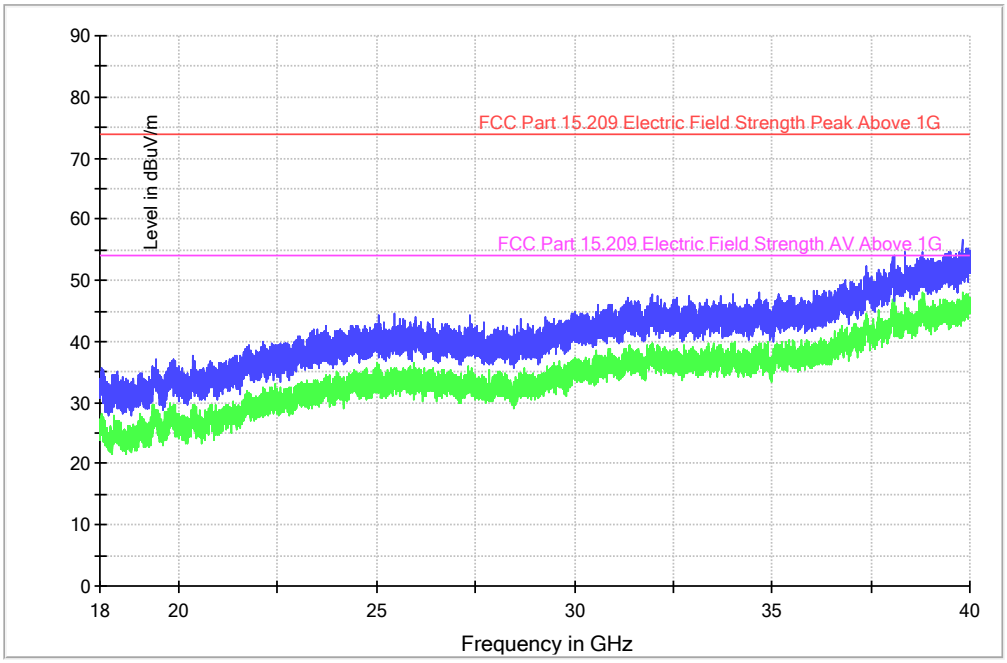
Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2405.000	101.1	36.7	28.1	4.4	88.1	94.0	-5.9
Horizontal	4810.000	47.9	36.7	35.5	4.4	42.3	54.0	-11.7
Horizontal	7215.000	51.3	36.1	37.2	4.4	48.0	54.0	-6.0
Horizontal	9620.000	52.6	36.2	38.9	4.4	50.9	54.0	-3.1

Notes:
1. Peak Detector Data unless otherwise stated.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.





During the test, a 2.4-2.5GHz filter was added.



No emissions significantly above equipment noise floor

Applicant: NIKKO TOYS LIMITED
Date of Test: June 15, 2026
Worst Case Operating Mode:

Model:10790**(10791)**
Transmitting

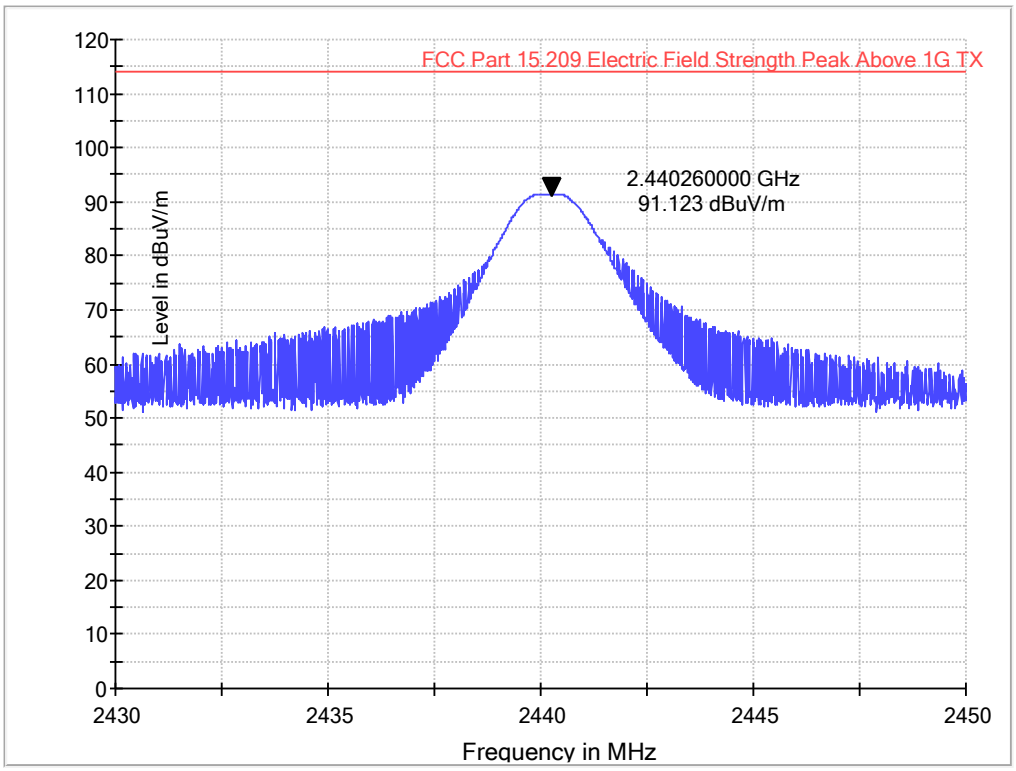
Table 2

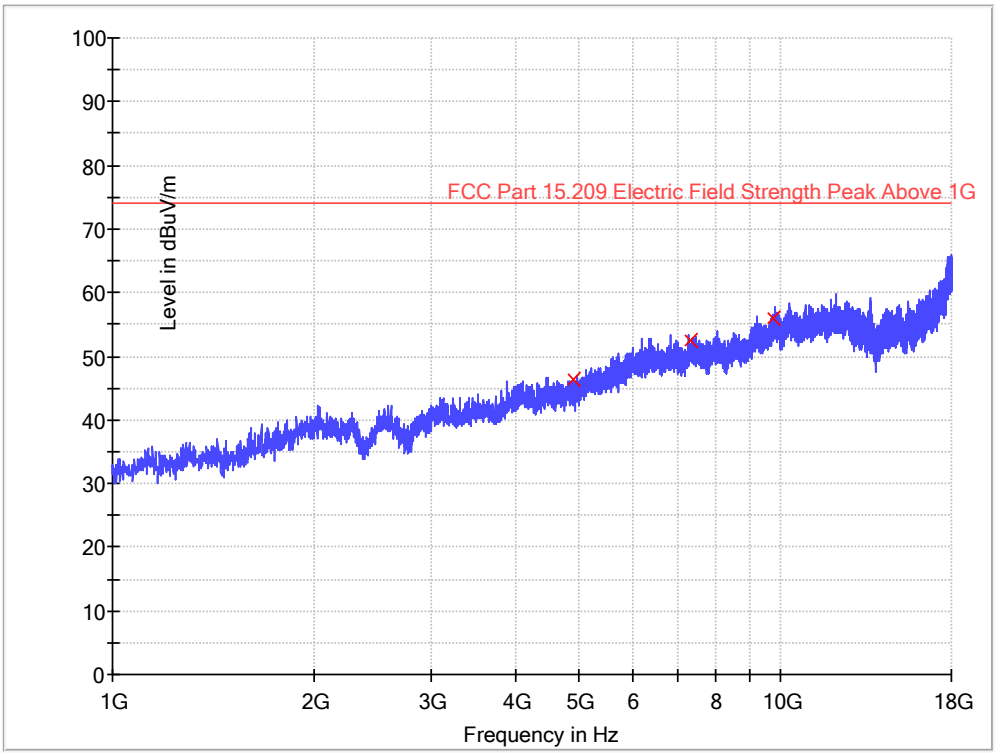
Radiated Emissions
(2440 MHz)

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2440.000	99.5	36.7	28.3	91.1	114.0	-22.9
Horizontal	4880.000	47.4	36.7	35.7	46.4	74.0	-27.6
Horizontal	7320.000	51.0	36.1	37.5	52.4	74.0	-21.6
Horizontal	9760.000	55.3	36.2	37.0	56.1	74.0	-17.9

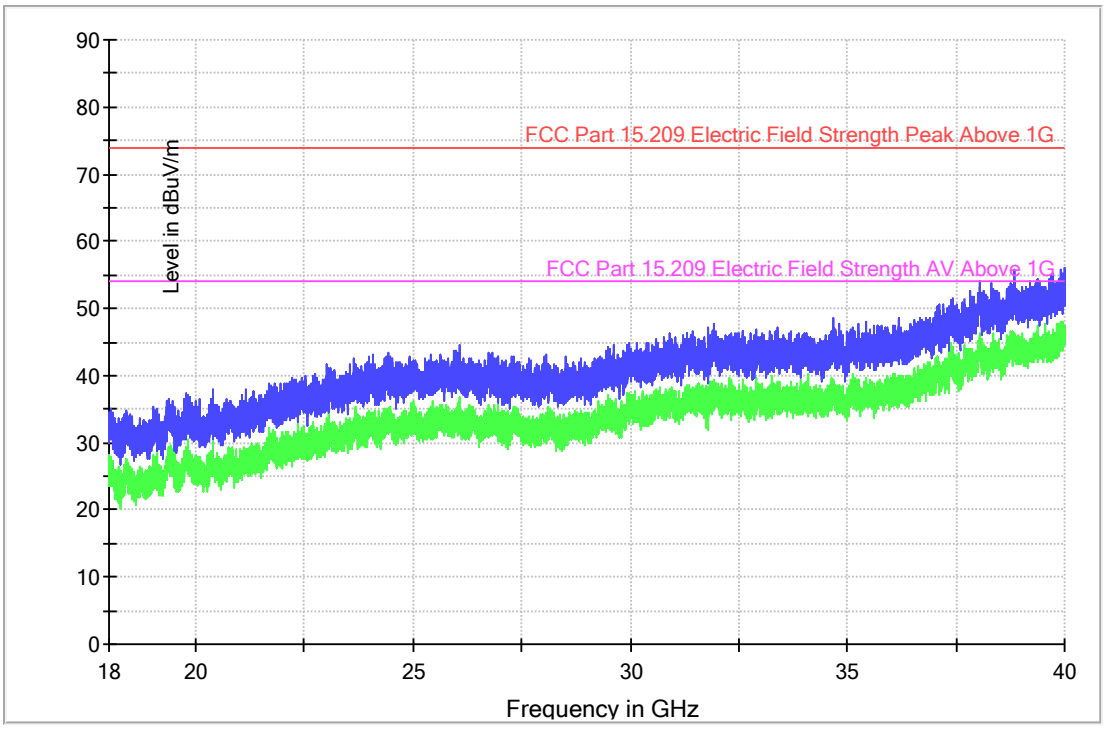
Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2440.000	99.5	36.7	28.3	4.4	86.7	94.0	-7.3
Horizontal	4880.000	47.4	36.7	35.7	4.4	42.0	54.0	-12.0
Horizontal	7320.000	51.0	36.1	37.5	4.4	48.0	54.0	-6.0
Horizontal	9760.000	55.3	36.2	37.0	4.4	51.7	54.0	-2.3

Notes:
1. Peak Detector Data unless otherwise stated.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.





During the test, a 2.4-2.5GHz filter was added.



No emissions significantly above equipment noise floor

Applicant: NIKKO TOYS LIMITED
Date of Test: June 15, 2026
Worst Case Operating Mode:

Model:10790**(10791)**
Transmitting

Table 3

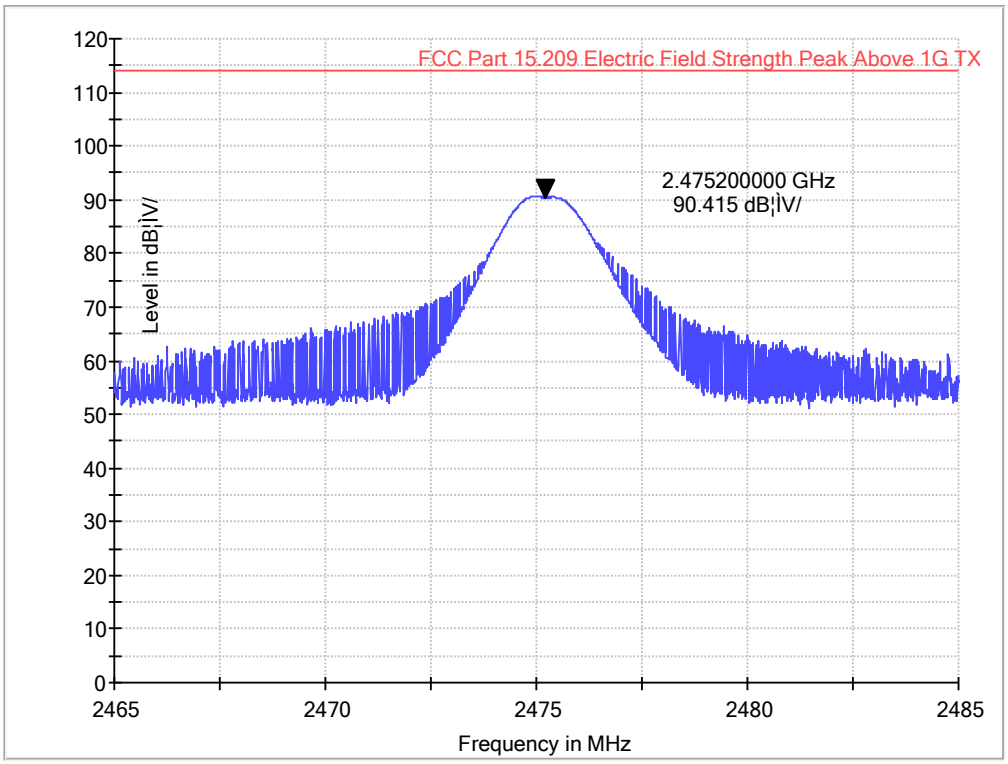
Radiated Emissions
(2475 MHz)

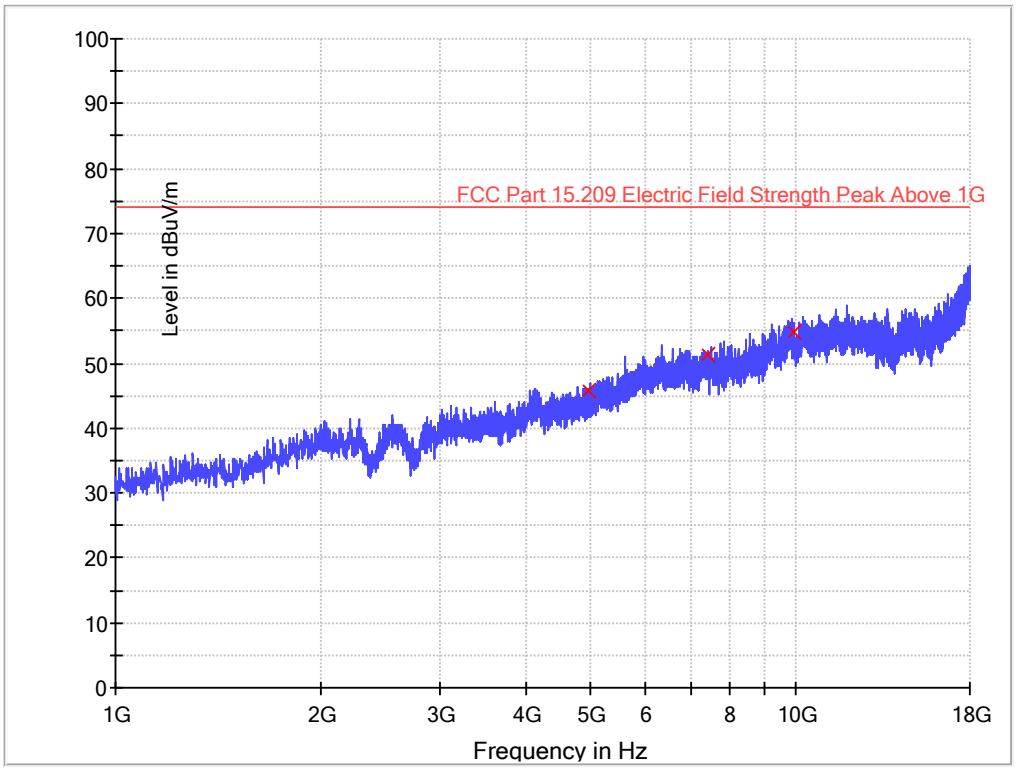
Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2475.000	98.6	36.7	28.5	90.4	114.0	-23.6
Horizontal	4950.000	46.5	36.7	35.9	45.7	74.0	-28.3
Horizontal	7425.000	50.3	36.1	37.2	51.4	74.0	-22.6
Horizontal	9900.000	52.2	36.3	38.9	54.8	74.0	-19.2

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2475.000	98.6	36.7	28.5	4.4	86.0	94.0	-8.0
Horizontal	4950.000	46.5	36.7	35.9	4.4	41.3	54.0	-12.7
Horizontal	7425.000	50.3	36.1	37.2	4.4	47.0	54.0	-7.0
Horizontal	9900.000	52.2	36.3	38.9	4.4	50.4	54.0	-3.6

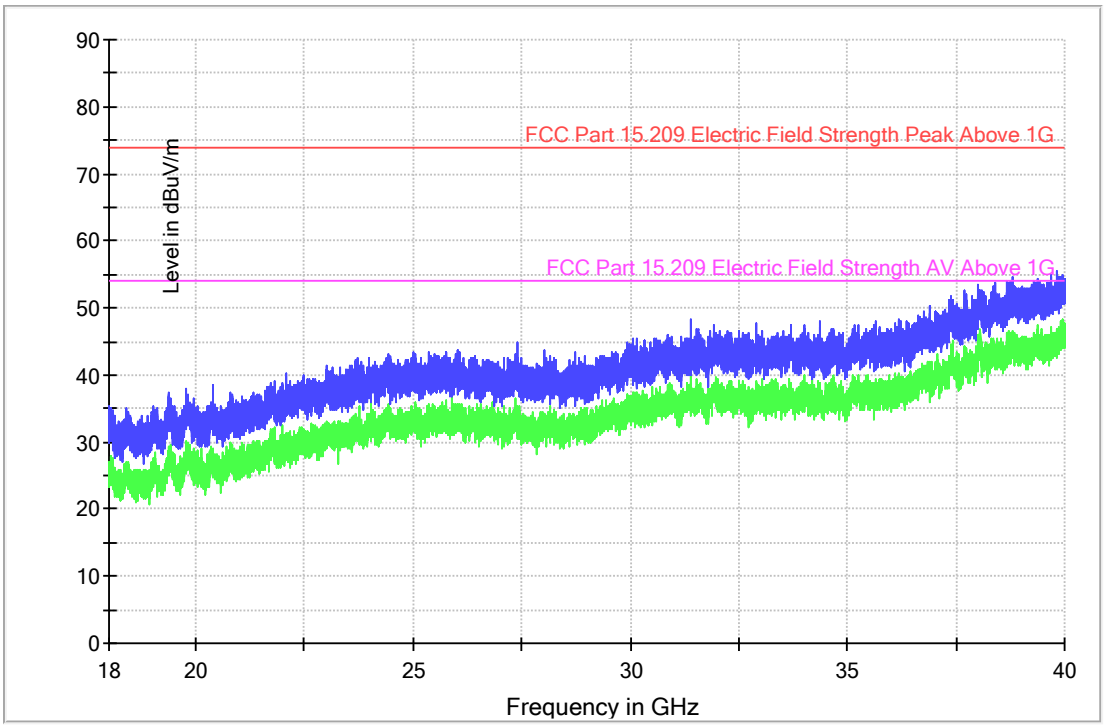
Notes:

1. Peak Detector Data unless otherwise stated.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.





During the test, a 2.4-2.5GHz filter was added.



No emissions significantly above equipment noise floor

5.0 Equipment Photographs

For electronic filing, the photographs of the tested EUT are saved with filename: external photos.pdf& internal photos.pdf.

6.0 Product Labelling

For electronic filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

7.0 Technical Specifications

For electronic filing, the block diagram and schematics of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

8.0 Instruction Manual

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

9.0 Miscellaneous Information

This miscellaneous information includes details of the measured bandedge, 20dB Bandwidth, the test procedure and calculation of factor such as pulse desensitization.

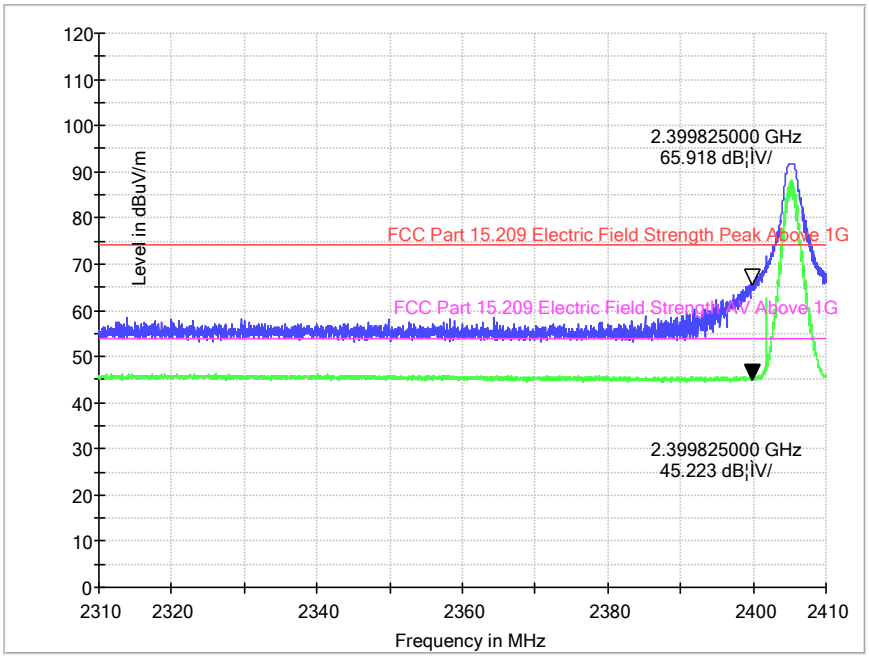
9.1 Bandedge Plot

The test plots are attached as below. From the plot, the field strength of any emissions outside of the specified frequency band are attenuated to the general radiated emission limits in section 15.209. It fulfils the requirement of 15.249(d).

Peak Measurement

Restricted-band band-edge tests shall be performed as radiated measurements, i.e(Band-edge Plot).

(i) **Lower channel 2405.000MHz:**

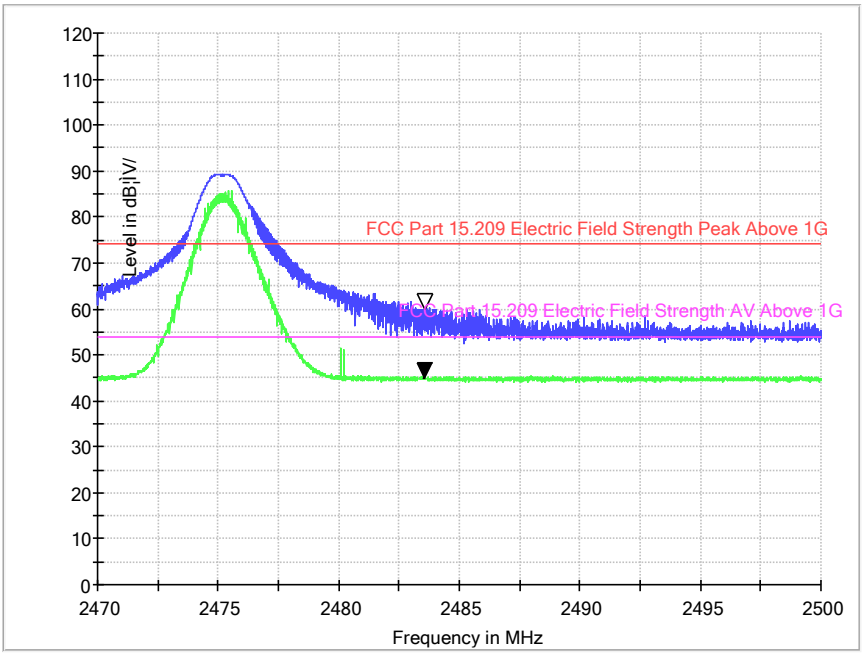


Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2400.000	74.5	36.7	28.1	65.9	74.0	-8.1

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2400.000	53.8	36.7	28.1	45.2	54.0	-8.8

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74dBµv/m (Peak Limit) and 54dBµv/m (Average Limit).

(ii) Upper channel 2475.000MHz:



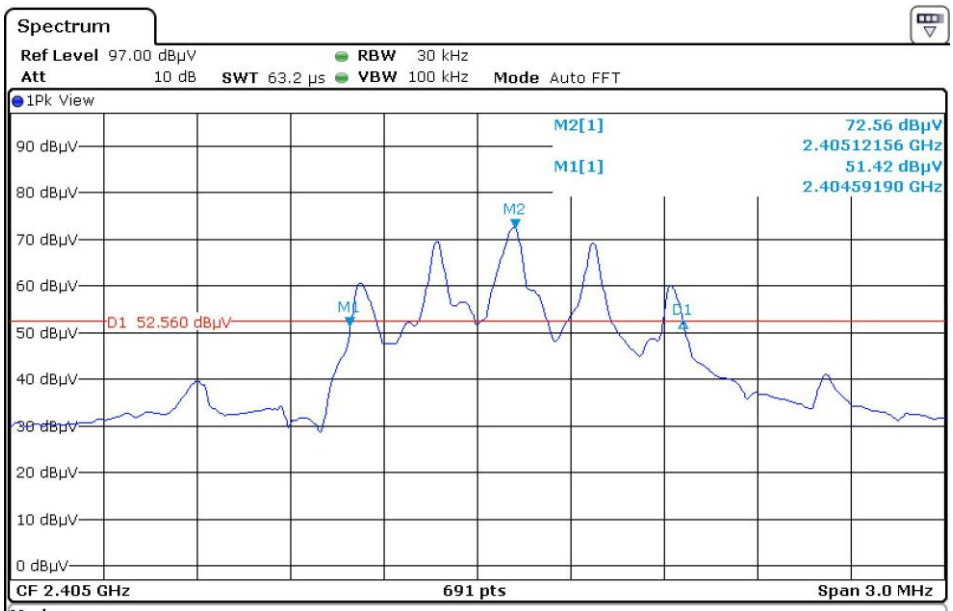
Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2483.500	67.7	36.8	29.1	60.0	74.0	-14.0

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2483.500	52.8	36.8	29.1	45.1	54.0	-8.9

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74dBµv/m (Peak Limit) and 54dBµv/m (Average Limit).

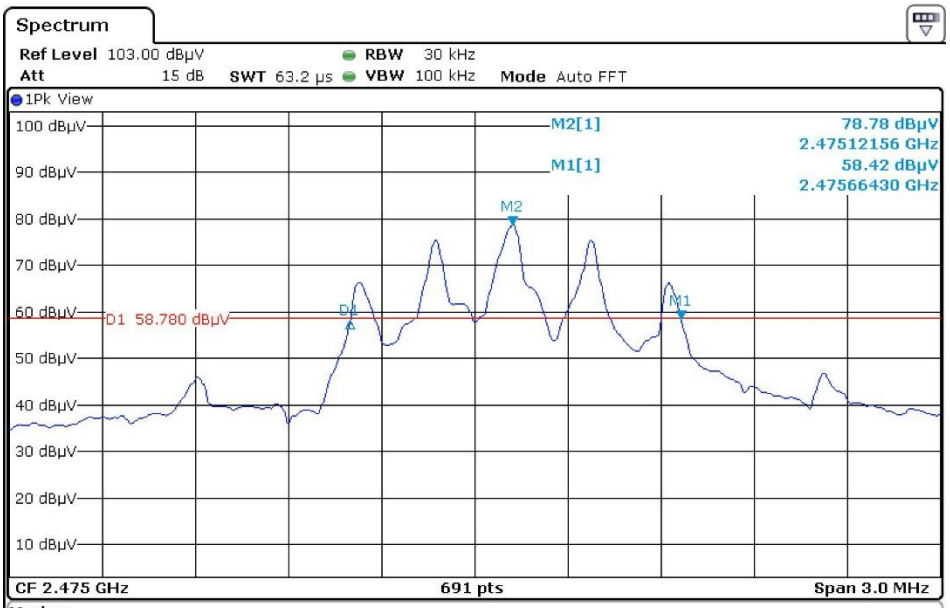
9.2 20dB Bandwidth

Pursuant to FCC part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered. The test procedure refers to ANSI C63.10-2020 Section 6.9.2. The test plots are reported as below.



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4045919 GHz	51.42 dBµV		
D1	M1	1	1.068 MHz	1.30 dB		
M2		1	2.40512156 GHz	72.56 dBµV		



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4756643 GHz	58.42 dBµV		
D1	M1	1	-1.068 MHz	-0.24 dB		
M2		1	2.47512156 GHz	78.78 dBµV		

9.3 Discussion of Pulse Desensitization

Pulse desensitivity is not applicable for this device.The effective period (T_{eff}) is approximately 0.17101ms for a digital "1" bit, as shown in the plots of Section9.4 With a resolution bandwidth (3 dB) of 100 kHz, the pulse desensitivity factor was 0 dB

9.4 Calculation of Average Factor

Averaging factor in dB = 20 log (duty cycle)

The specification for output field strengths in accordance with the FCC rules specify measurements with an average detector. During testing, a spectrum analyzer incorporating a peak detector was used. Therefore, a reduction factor can be applied to the resultant peak signal level and compared to the limit for measurement instrumentation incorporating an average detector.

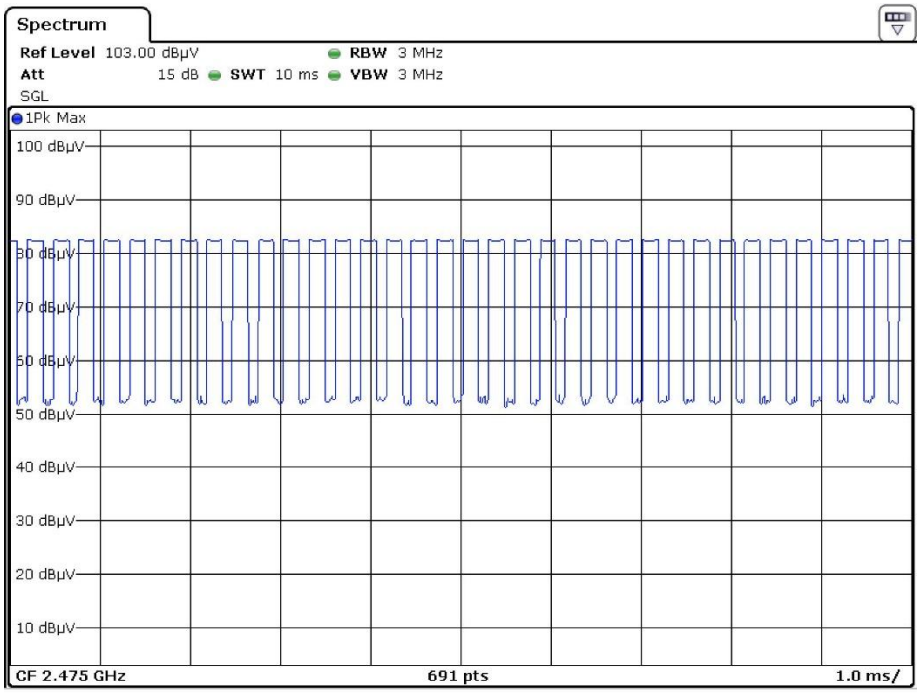
The time period over which the duty cycle is measured is 100 milliseconds, or the repetition cycle, whichever is a shorter time frame. The worst case (highest percentage on) duty cycle is used for the calculation. The duty cycle is measured by placing the spectrum analyzer in zero scan (receiver mode) and linear mode at maximum bandwidth (3 MHz at 3 dB down) and viewing the resulting time domain signal output from the analyzer on a Tektronix oscilloscope. The oscilloscope is used because of its superior time base and triggering facilities.

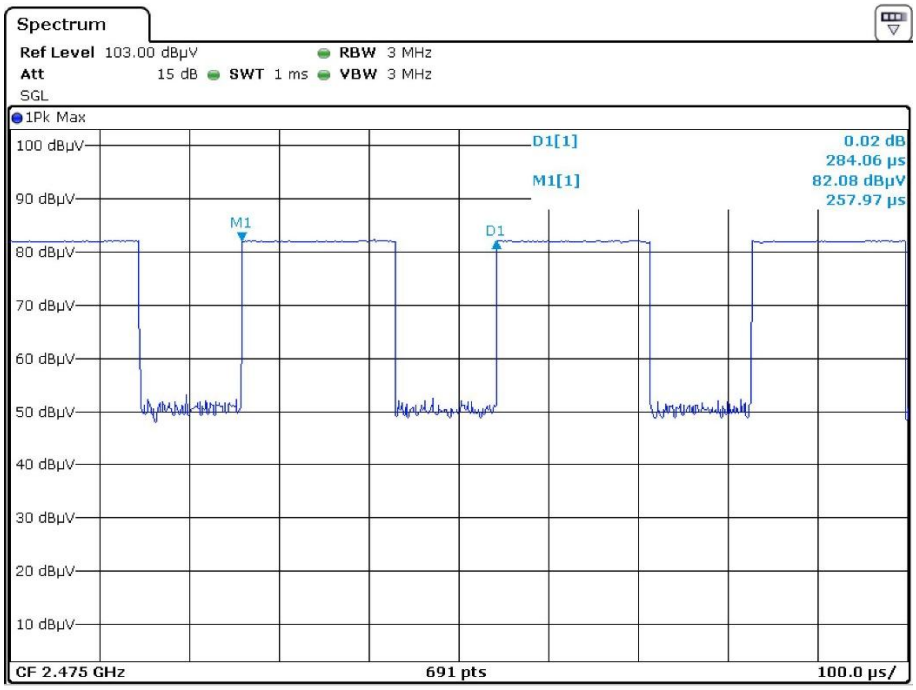
The duty cycle is simply the on-time divided by the period:

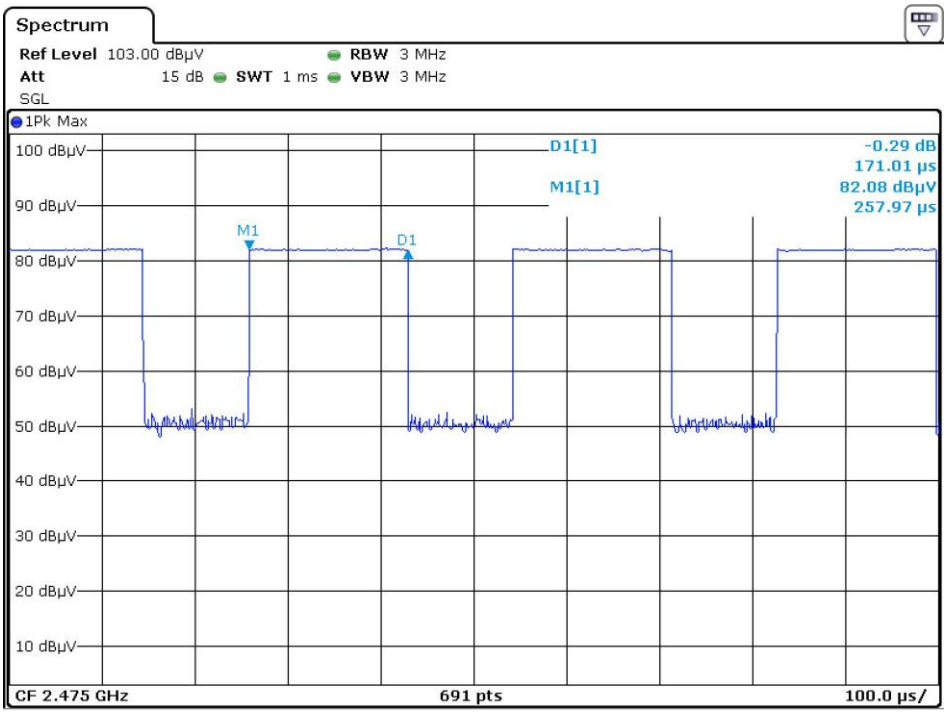
The duration of one cycle = 0.28406ms
Effective period of the cycle = 0.17101ms
DC =0.17101ms / 0.28406ms =0.6020 or 60.20%

Therefore, the averaging factor is found by 20 $\log_{10}$(0.6020) =-4.4dB

The test plots are attached as below.


Spectrum
Ref Level 103.00 dBµV
RBW 3 MHz
Att 15 dB
SWT 10 ms
VBW 3 MHz
SGL
1Pk Max
100 dBµV
90 dBµV
80 dBµV
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
CF 2.475 GHz
691 pts
1.0 ms/


Spectrum
Ref Level 103.00 dBµV
RBW 3 MHz
Att 15 dB
SWT 1 ms
VBW 3 MHz
SGL
1Pk Max
D1[1]
0.02 dB
284.06 µs
M1[1]
82.08 dBµV
257.97 µs
M1
D1
100 dBµV
90 dBµV
80 dBµV
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
CF 2.475 GHz
691 pts
100.0 µs/


Spectrum
Ref Level 103.00 dBµV
RBW 3 MHz
Att 15 dB
SWT 1 ms
VBW 3 MHz
SGL
1Pk Max
100 dBµV
90 dBµV
80 dBµV
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
M1
D1
D1[1]
M1[1]
-0.29 dB
171.01 µs
82.08 dBµV
257.97 µs
CF 2.475 GHz
691 pts
100.0 µs/

9.5 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.10 - 2020.

The transmitting equipment under test (EUT) is placed on a styrene turntable which is four feet in diameter and approximately 0.8 meter up to 1GHz and 1.5 meter above 1GHz in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjusted through all three orthogonal axes to obtain maximum emission levels. The antenna height and polarization are varied during the testing to search for maximum signal levels.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in Section 9.4.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.

9.5 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

The IF bandwidth used for measurement of radiated signal strength was 10 kHz for emission below 30 MHz and 120 kHz for emission from 30 MHz to 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Section9.2). Above 1000 MHz, a resolution bandwidth of 1 MHz is used, RBW 3 MHz used for fundamental emission.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the restricted bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, but those measurements taken at a closer distance are so marked.

10.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-13	BiConiLog Antenna	ETS	3142E	00217919	29-May-2025	29-May-2028
SZ185-04	EMI Receiver	R & S	ESR7	102466	1-Nov-2025	1-Nov-2026
SZ061-09	Horn Antenna	ETS	3115	00092347	20-Oct-2025	20-Oct-2028
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	5-May-2024	5-May-2027
SZ061-15	Double-Ridged Waveguide Horn Antenna	ETS	3116C-PA	00224718	14-Jun-2024	14-Jun-2027
SZ056-06	Spectrum Analyzer	R&S	FSV40	101101	1-Dec-2025	1-Dec-2026
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	13-Apr-2026	13-Apr-2027
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	12-Dec-2021	12-Dec-2026
SZ062-02	RF Cable	RADIALL	RG 213U	--	1-May-2026	1-Nov-2026
SZ062-05	RF Cable	RADIALL	0.04-26.5GHz	--	1-May-2026	1-Nov-2026
SZ062-12	RF Cable	RADIALL	0.04-26.5GHz	--	1-May-2026	1-Nov-2026
SZ067-04	Notch Filter	Micro-Tronics	BRM50702-02	--	13-Apr-2026	13-Apr-2027

********** End of Report**********