Guangzhou Maipai Electronics Co., Ltd.

TEST REPORT

SCOPE OF WORK
FCC Testing–KM-226W, MD 88122

REPORT NUMBER
210820008SZN-001

ISSUE DATE
27 September 2021

PAGES
26

DOCUMENT CONTROL NUMBER
FCC ID 249_C

Guangzhou Maipai Electronics Co., Ltd.

Application for Certification

FCC ID: 2AFVEKM226W

2.4G Wireless Keyboard

Model: KM-226W, MD 88122

2.4GHz Transmitter

Report No.: 210820008SZN-001

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 [10-1-20]

Prepared and Checked by:

Jeff Liang
Engineer

Approved by:

Peter Kang
Senior Technical Supervisor
Date: 27 September 2021

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 [10-1-20 Edition] provision.

Report prepared by:

Jeff Liang
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
Tel / Fax: 86-755-8601 6288/86-755-8601 6751

Table of Contents

1.0 Summary of Test Result

Applicant: Guangzhou Maipai Electronics Co., Ltd.
Applicant Address: Room 202,No.94,Shinan Road,Xianchong Village Qiaonan Street,Panyu District Guangzhou China
Manufacturer: Guangzhou Maipai Electronics Co., Ltd.
Manufacturer Address: Room 202,No.94,Shinan Road,Xianchong Village Qiaonan Street,Panyu District Guangzhou China

MODEL: KM-226W, MD 88122
FCC ID: 2AFVEKM226W

Test Specification	Reference	Results
Transmitter Radiated Emission Band edge	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 2.4G Wireless Keyboard operating at 2.4G Band. The EUT can be powered by DC 1.5V (1 x 1.5V AAA battery). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna
Modulation Type: GFSK
Antenna Gain: 1.8dBi

The Model: MD 88122 is the same as the Model: KM-226W in hardware aspect. The difference in model number serves as marketing strategy.

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 2.4G Wireless Keyboard which has 2.4GHz wireless function.

2.3 Test Methodology

Radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). 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 at 101, 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 (2013).

The EUT was powered by DC 1.5V (1 x 1.5V AAA battery) 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 centre 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 Section 4.

The EUT and transmitting antenna was centered on 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 typical use.

3.3 Special Accessories

No special accessories used.

3.4 Equipment Modification

Any modifications installed previous to testing by Guangzhou Maipai Electronics Co., Ltd. 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.

3.6 Support Equipment List and Description

Description	Manufacturer	Model No.
N/A	N/A	N/A

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
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
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
290.251000 MHz

Judgement: Passed by 8.3 dB

TEST PERSONNEL:

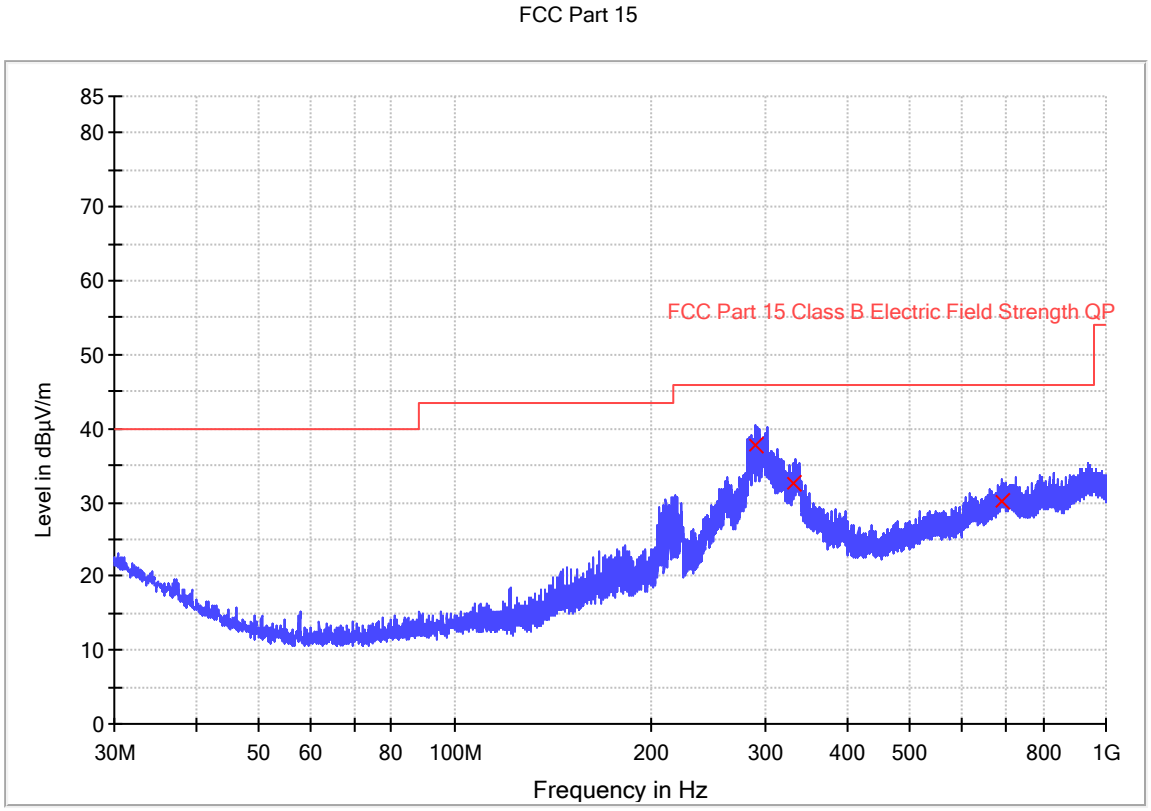
Sign on file

Jeff Liang, Engineer
Typed/Printed Name

03 September 2021
Date

Applicant: Guangzhou Maipai Electronics Co., Ltd.
Date of Test: 03 September 2021 Model: KM-226W
Worst Case Operating Mode: Transmitting(2402.65MHz)

ANT Polarity: Horizontal



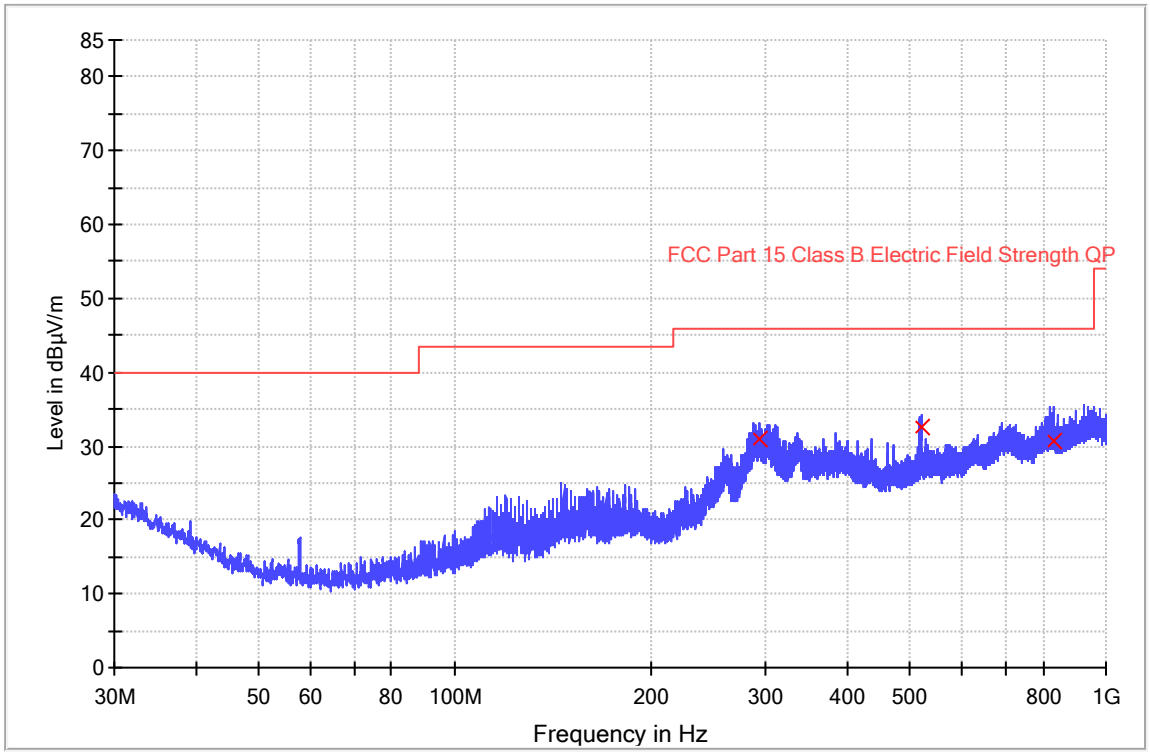
Frequency (MHz)	Quasi Peak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
290.251000	37.7	1000.0	120.000	100.0	H	21.0	8.3	46.0
331.928667	32.5	1000.0	120.000	100.0	H	22.3	13.5	46.0
693.027333	30.2	1000.0	120.000	100.0	H	31.1	15.8	46.0

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

Applicant: Guangzhou Maipai Electronics Co., Ltd.
Date of Test: 03 September 2021 Model: KM-226W
Worst Case Operating Mode: Transmitting(2402.65MHz)

ANT Polarity: Vertical

FCC Part 15



Frequency (MHz)	Quasi Peak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m
293.646000	31.0	1000.0	120.000	100.0	V	21.1	15.0	46.0
520.529000	32.7	1000.0	120.000	100.0	V	27.5	13.3	46.0
833.030667	30.8	1000.0	120.000	100.0	V	31.8	15.2	46.0

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Quasi Peak (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
2400.000 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 5.3 dB

TEST PERSONNEL:

Sign on file

Jeff Liang, Engineer
Typed/Printed Name

03 September 2021
Date

Applicant: Guangzhou Maipai Electronics Co., Ltd.
Date of Test: 03 September 2021 Model: KM-226W
Worst Case Operating Mode: Transmitting

Table 1

Radiated Emissions
(2402.65 MHz)

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2402.650	91.3	36.7	28.1	82.7	114.0	-31.3
Horizontal	4805.300	54.7	36.7	35.5	53.5	74.0	-20.5
Horizontal	7207.950	47.0	36.8	35.6	45.8	74.0	-28.2
Horizontal	9610.600	48.4	36.3	38.0	50.1	74.0	-23.9

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2402.650	91.3	36.7	28.1	41.9	40.8	94.0	-53.2
Horizontal	4805.300	54.7	36.7	35.5	41.9	11.6	54.0	-42.4
Horizontal	7207.950	47.0	36.8	35.6	41.9	3.9	54.0	-50.1
Horizontal	9610.600	48.4	36.3	38.0	41.9	8.2	54.0	-45.8

Notes:
1. Peak Detector Data unless otherwise stated.

2. All measurements were made at 3 meter. 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.

Applicant: Guangzhou Maipai Electronics Co., Ltd.
Date of Test: 03 September 2021 Model: KM-226W
Worst Case Operating Mode: Transmitting

Table 2

Radiated Emissions
(2441.65 MHz)

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2441.650	90.5	36.7	28.1	81.9	114.0	-32.1
Horizontal	4883.300	56.3	36.7	35.5	55.1	74.0	-18.9
Horizontal	7324.950	49.3	36.8	35.6	48.1	74.0	-25.9
Horizontal	9766.600	51.5	36.3	38.0	53.2	74.0	-20.8

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2441.650	90.5	36.7	28.1	41.9	40.0	94.0	-54.0
Horizontal	4883.300	56.3	36.7	35.5	41.9	13.2	54.0	-40.8
Horizontal	7324.950	49.3	36.8	35.6	41.9	6.2	54.0	-47.8
Horizontal	9766.600	51.5	36.3	38.0	41.9	11.3	54.0	-42.7

Notes:
1. Peak Detector Data unless otherwise stated.
2. All measurements were made at 3 meter. 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.

Applicant: Guangzhou Maipai Electronics Co., Ltd.
Date of Test: 03 September 2021 Model: KM-226W
Worst Case Operating Mode: Transmitting

Table 3

Radiated Emissions
(2480.65 MHz)

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2480.650	90.7	36.7	28.1	82.1	114.0	-31.9
Horizontal	4961.300	55.2	36.7	35.5	54.0	74.0	-20.0
Horizontal	7441.950	51.3	36.8	35.6	50.1	74.0	-23.9
Horizontal	9922.600	52.7	36.3	38.0	54.4	74.0	-19.6

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2480.650	90.7	36.7	28.1	41.9	40.2	94.0	-53.8
Horizontal	4961.300	55.2	36.7	35.5	41.9	12.1	54.0	-41.9
Horizontal	7441.950	51.3	36.8	35.6	41.9	8.2	54.0	-45.8
Horizontal	9922.600	52.7	36.3	38.0	41.9	12.5	54.0	-41.5

Notes:
1. Peak Detector Data unless otherwise stated.
2. All measurements were made at 3 meter. 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.

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 2402.650 MHz:

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2400.000	70.7	36.7	28.1	62.1	74.0	-11.9

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2400.000	57.3	36.7	28.1	48.7	54.0	-5.3

(ii) Upper channel 2480.650 MHz:

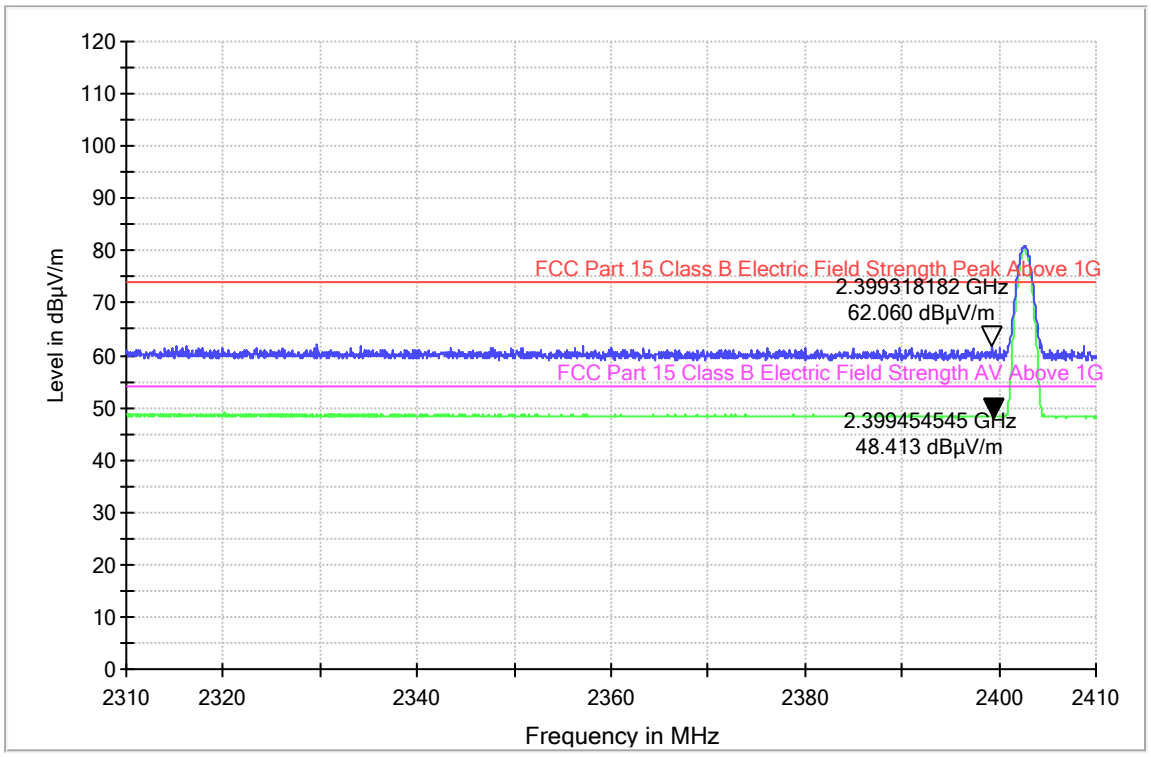
Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2483.500	69.2	36.8	29.1	61.5	74.0	-12.5

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2483.500	56.1	36.8	29.1	48.4	54.0	-5.6

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).

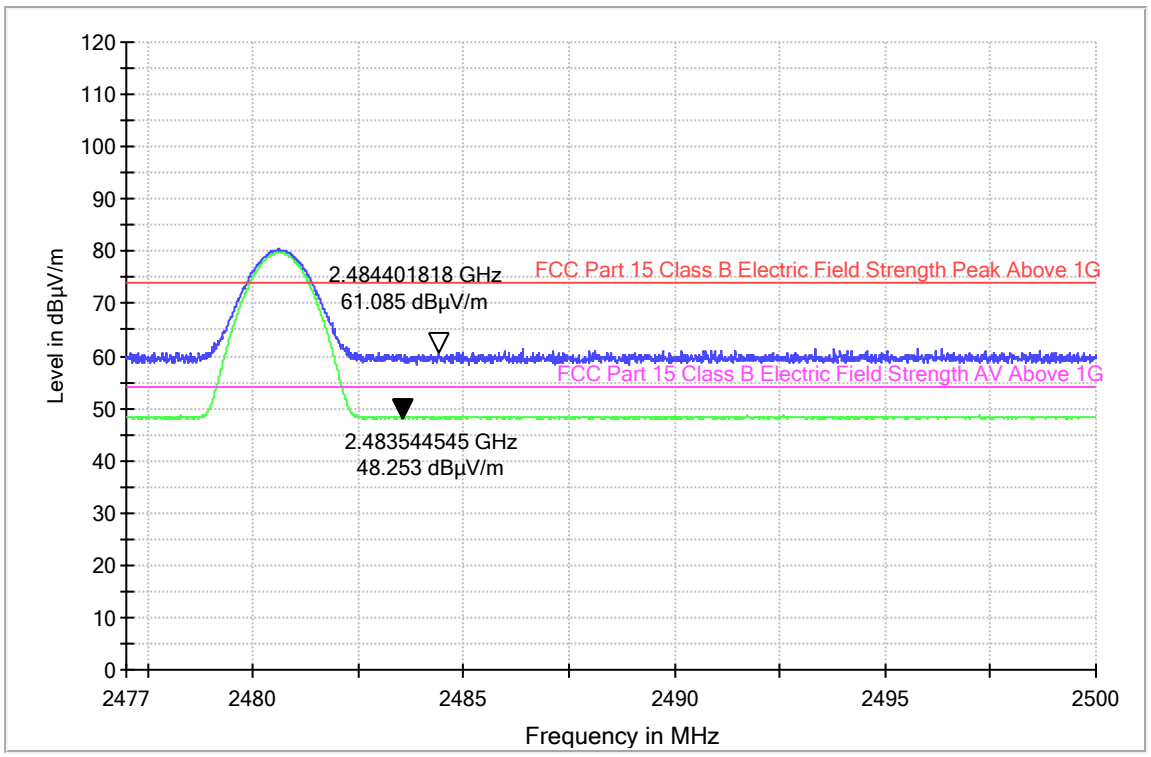
Lowest frequency Channel

Electric Field Strength 1-18GdBuV TX Band Edge+EIRP



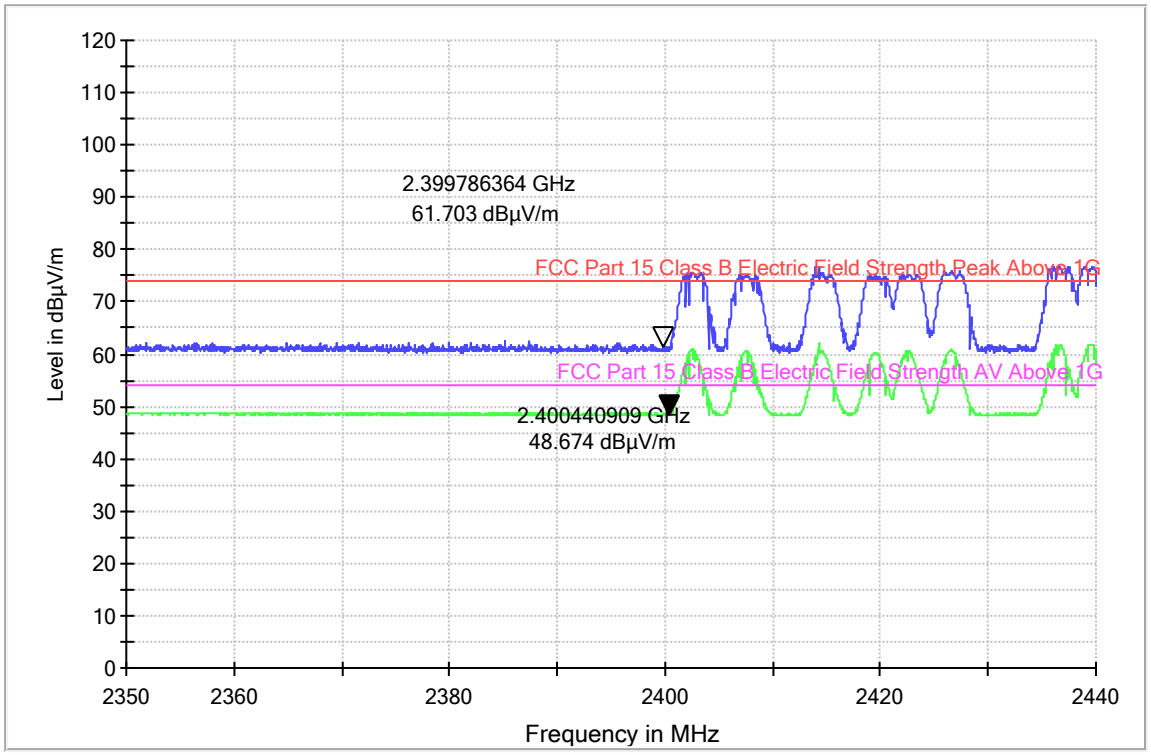
Highest frequency Channel

Electric Field Strength 1-18GdBuV TX Band Edge+EIRP



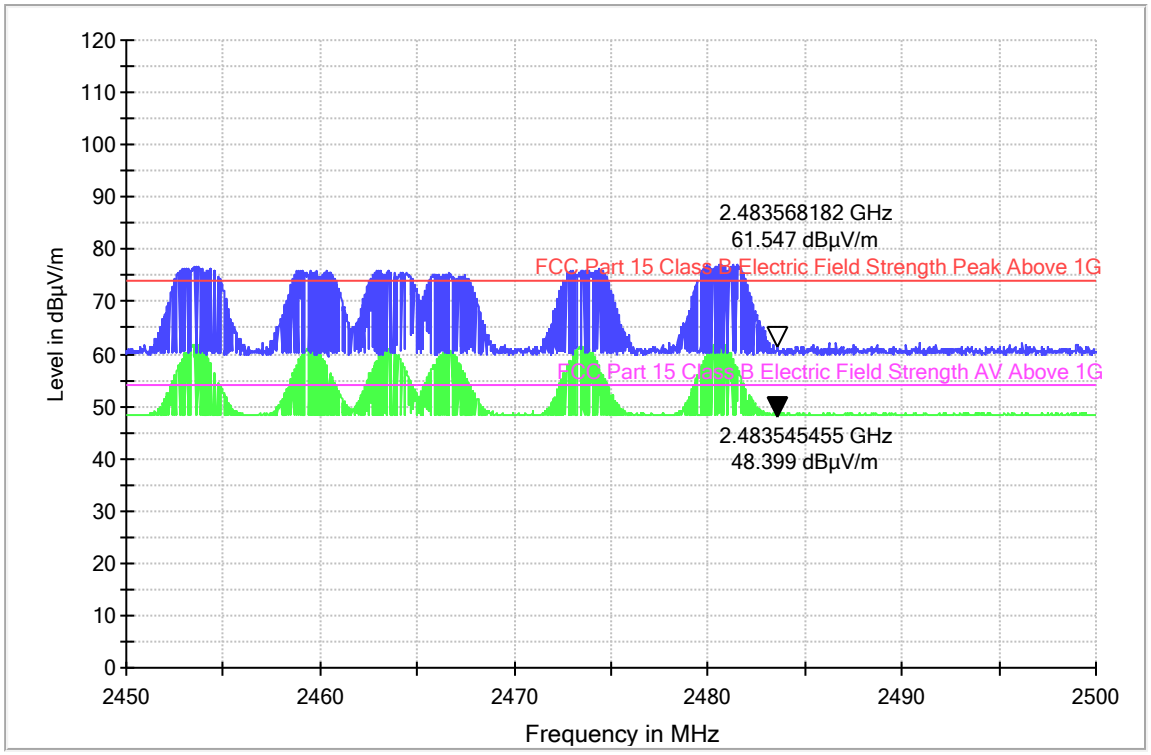
Hopping function
Lowest frequency Channel

Electric Field Strength 1-18GdBuV TX Band Edge+EIRP



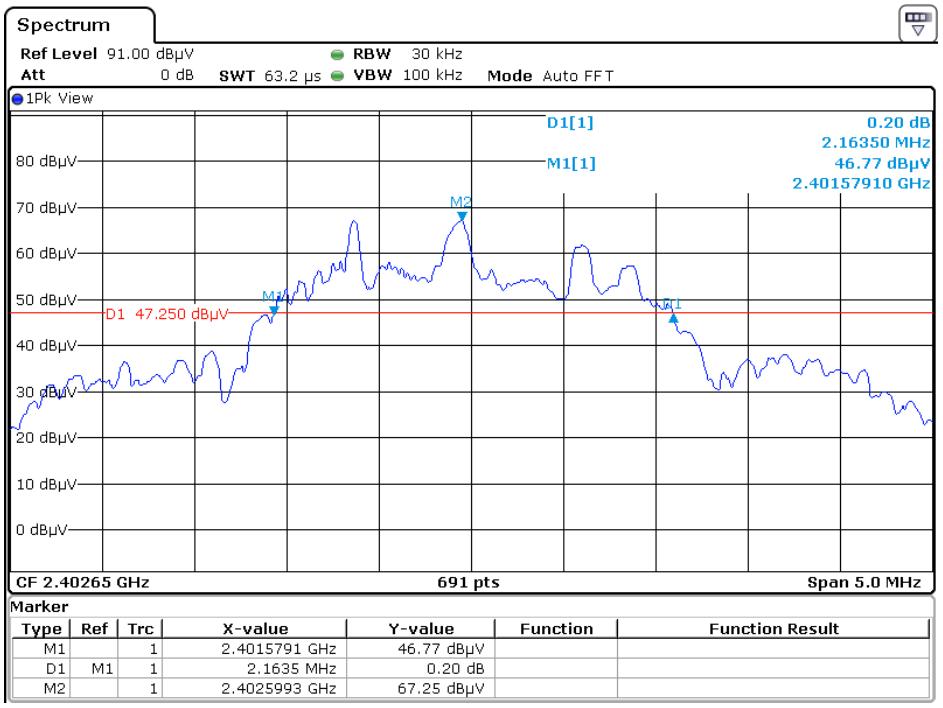
Highest frequency Channel

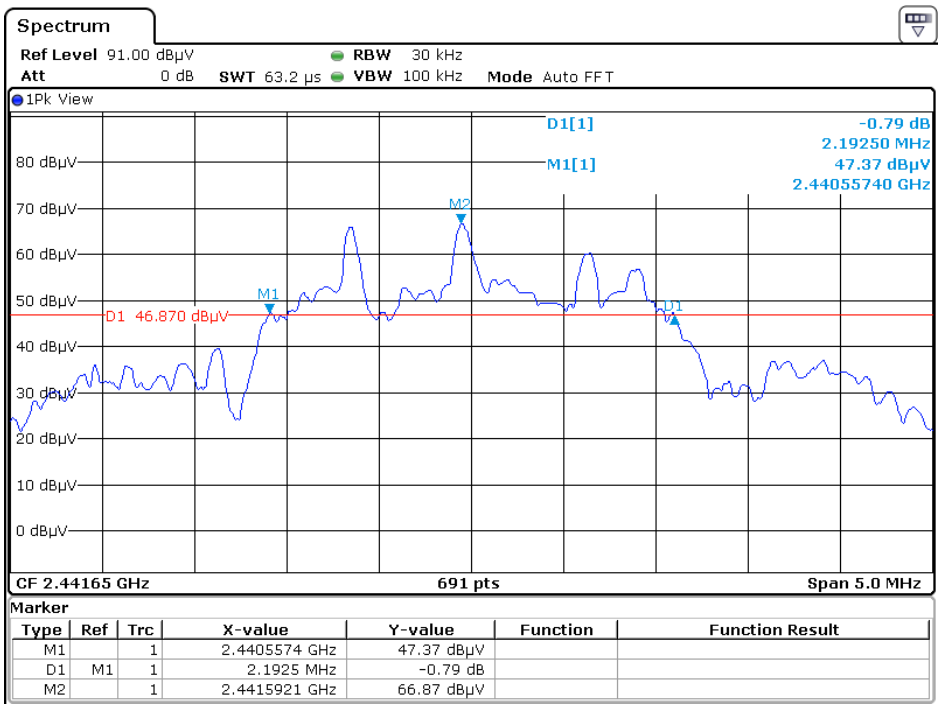
Electric Field Strength 1-18GdBuV TX Band Edge+EIRP

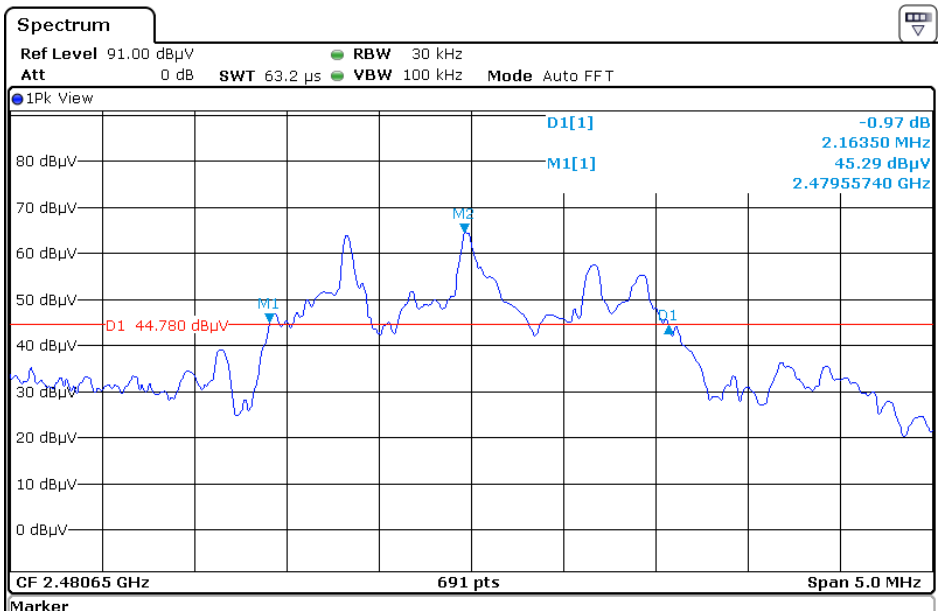


9.2 20dB Bandwidth

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 plots are reported as below.






Spectrum
Ref Level 91.00 dBµV
RBW 30 kHz
Att 0 dB
SWT 63.2 µs
VBW 100 kHz
Mode Auto FFT
1Pk View
D1[1]
-0.97 dB
2.16350 MHz
M1[1]
45.29 dBµV
2.47955740 GHz
80 dBµV
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
0 dBµV
D1 44.780 dBµV
M1
M2
D1
CF 2.48065 GHz
691 pts
Span 5.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.4795574 GHz 45.29 dBµV
D1 M1 1 2.1635 MHz -0.97 dB
M2 1 2.4806138 GHz 64.78 dBµV

9.3 Discussion of Pulse Desensitization

Pulse desensitivity is not applicable for this device. The effective period (T_{eff}) is approximately 0.094ms for a digital "1" bit, as shown in the plots of Section 9.4. With a resolution bandwidth (3 dB) of 3MHz, 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.

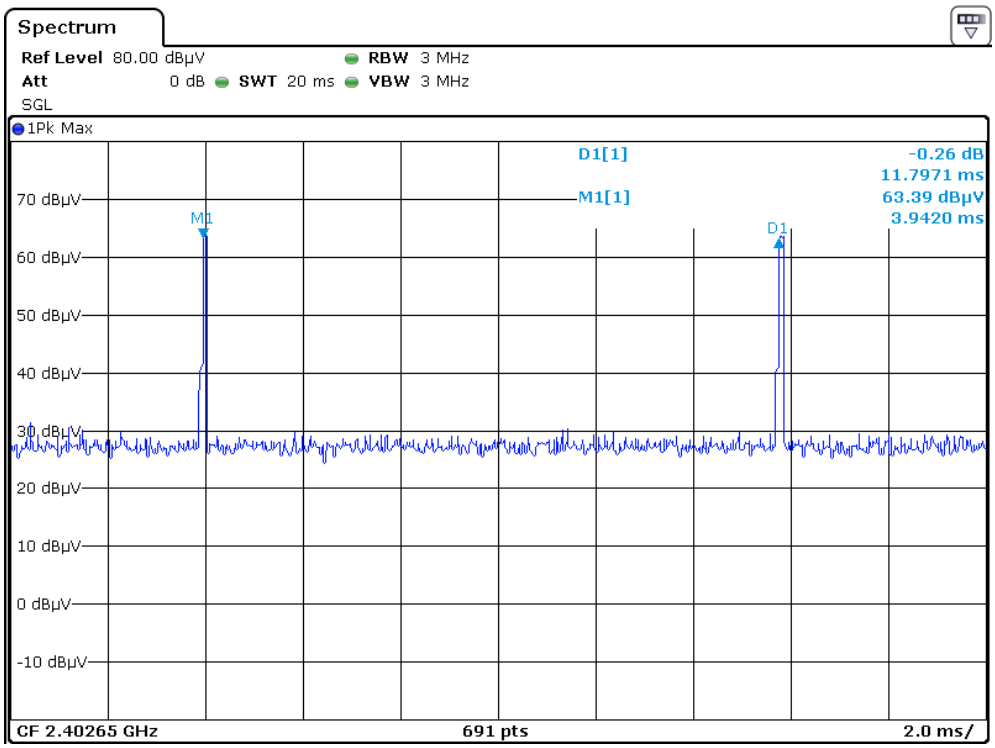
The time period over which the duty cycle is measured is 100 milliseconds, or the repetition cycle, whichever is a shorter time frame. The worst case (highest percentage on) duty cycle is used for the calculation. The duty cycle is measured by placing the spectrum analyzer in zero scan (receiver mode) 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.

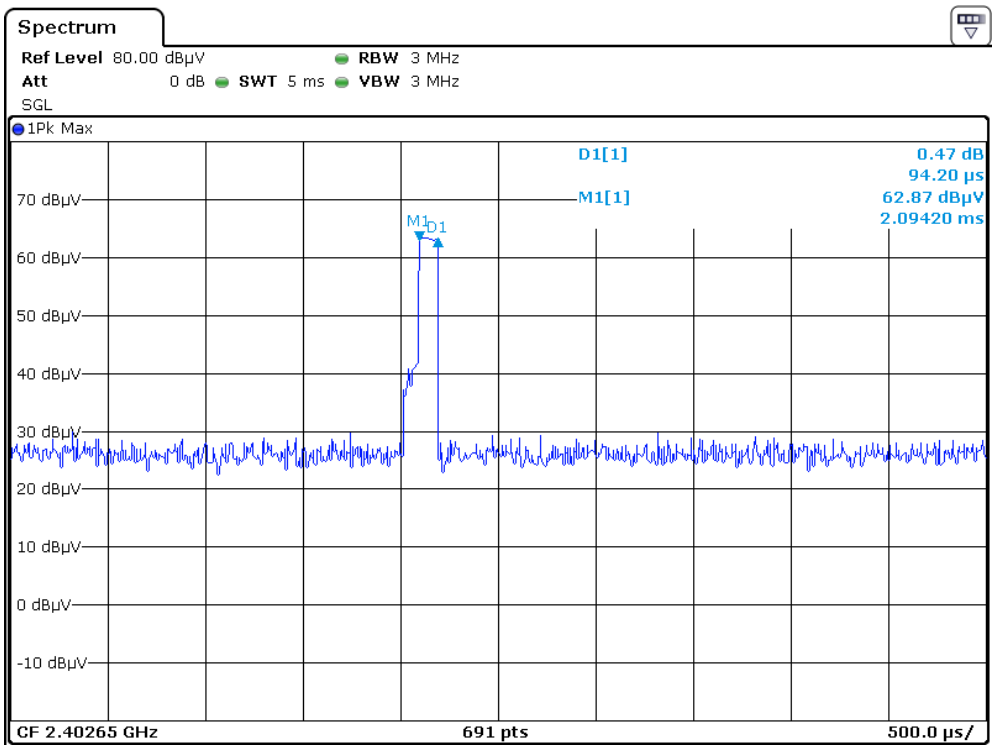
The duty cycle is simply the on-time divided by the period:

The duration of one cycle = 11.797ms
Effective period of the cycle = 0.094ms
DC =0.094ms / 11.797ms =0.0080 or 0.80%

Therefore, the averaging factor is found by $20 \log_{10}(0.0080) = -41.9$dB

The test plots are attached as below.


Spectrum
Ref Level 80.00 dBµV
RBW 3 MHz
Att 0 dB SWT 20 ms VBW 3 MHz
SGL
1Pk Max
D1[1] -0.26 dB
11.7971 ms
M1[1] 63.39 dBµV
3.9420 ms
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
0 dBµV
-10 dBµV
M1
D1
CF 2.40265 GHz
691 pts
2.0 ms/


Spectrum
Ref Level 80.00 dBµV
RBW 3 MHz
Att 0 dB SWT 5 ms VBW 3 MHz
SGL
1Pk Max
D1[1] 0.47 dB
94.20 µs
M1[1] 62.87 dBµV
2.09420 ms
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
0 dBµV
-10 dBµV
M1
D1
CF 2.40265 GHz
691 pts
500.0 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 - 2013.

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 Section 9.3). Above 1000 MHz, a resolution bandwidth of 1 MHz is used, RBW 3MHz 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
SZ061-12	BiConiLog Antenna	ETS	3142E	00166158	04-Aug-2021	04-Aug-2024
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	18-May-2021	18-May-2023
SZ061-08	Horn Antenna	ETS	3115	00092346	05-Sep-2020	05-Sep-2022
SZ061-07	Pyramidal Horn Antenna	ETS	3160-09	00083067	13-Aug-2019	13-Aug-2022
SZ056-03	Spectrum Analyzer	R&S	FSP30	101148	10-May-2021	10-May-2022
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	12-Jul-2021	12-Jul-2022
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	10-May-2021	10-May-2022
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	15-Dec-2018	15-Dec-2021
SZ062-02	RF Cable	RADIALL	RG 213U	--	01-Jun-2021	01-Dec-2021
SZ062-05	RF Cable	RADIALL	0.04-26.5GHz	--	01-Jun-2021	01-Dec-2021
SZ062-12	RF Cable	RADIALL	0.04-26.5GHz	--	01-Jun-2021	01-Dec-2021
SZ067-04	Notch Filter	Micro-Tronics	BRM50702-02	--	01-Jun-2021	01-Dec-2021