

Zaidtek Electronic Technology (Xiamen) Co., Ltd.

TEST REPORT

SCOPE OF WORK

FCC TESTING-HM8126

REPORT NUMBER

200216004SZN-001

ISSUE DATE

April 14, 2020

[REVISED DATE]

PAGES

23

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Test Report

Intertek Report No.: 200216004SZN-001

Zaidtek Electronic Technology (Xiamen) Co., Ltd.

Application For Certification

FCC ID: YVYHM8126

Wireless mouse

Model: HM8126

Brand Name: Amazonbasics

2.4GHz Transceiver

Report No.: 200216004SZN-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 [10-1-19]

Prepared and Checked by:	Approved by:	
Jeff Liang	Kidd Yang	
Engineer Control of the Control of t	Technical Supervisor	
	Date: April 14, 2020	

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Intertek Testing Services Shenzhen Ltd. Longhua Branch

101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen, P.R. China Tel: (86 755) 8601 6288 Fax: (86 755) 8601 6751

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MEASUREMENT/TECHNICAL REPORT

This report concerns (check	one:) Or	iginal Grant <u>X</u>	Cla	ıss II Change	
Equipment Type: <u>DXX - Part</u>	15 Low Power Com	munication Devic	e Transmitter		
Deferred grant requested p	er 47 CFR 0.457(d)(1	1)(ii)?	Yes	No _	Х
		If yes, defer	until:	date	
Company Name agrees to n	otify the Commissic	on by:			
of the intended date of ann	ouncement of the p	roduct so that the	dat e grant can be i	_	nt date.
Transition Rules Request pe	er 15.37?		Yes	No _	X
If no, assumed Part 15, S provision.	ubpart C for intent	cional radiator —	the new 47 C	CFR [10-1-19	Edition]
Report prepared by:					
	Jeff Liang Intertek Testing S 101, 201, Building Zhangkengjing Co LongHua District, Tel / Fax: 86-755-	; B, No. 308 Wuhe mmunity, GuanH ShenZhen, P.R. Cl	e Avenue, u Subdistrict, nina	Branch	

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1.0 Summary of Test Result

Applicant: Zaidtek Electronic Technology (Xiamen) Co., Ltd.

Applicant Address: No.285, Wengjiao Road, Xinyang Industrial Zone, Haicang District,

Xiamen, Fujian, China

Manufacturer: Zaidtek Electronic Technology (Xiamen) Co., Ltd.

Manufacturer Address: No.285, Wengjiao Road, Xinyang Industrial Zone, Haicang District,

Xiamen, Fujian, China

MODEL: HM8126

FCC ID: YVYHM8126

Test Specification	Reference	Results
Transmitter Radiated Emission	15.249 &15.209 &15.205	Pass
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.

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2.0 General Description

2.1 Product Description

The equipment under test (EUT) is a Wireless mouse with 2.4GHz transmitter function operating in 2405-2474MHz. The EUT is powered by DC 3V (2 pieces of AAA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK Antenna Gain: 4dBi Max

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 Wireless mouse, and the corresponding unit which associated with this EUT is subjected to FCC certification with FCC ID: YVYHM-R047

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, P.R. China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: CN1188).

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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).

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The EUT is powered by DC 3V (2 pieces of new 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 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 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.

Test Software: EMI Test, VER: 1.2.9

3.3 Special Accessories

No special accessories used.

3.4 Equipment Modification

Any modifications installed previous to testing by Zaidtek Electronic Technology (Xiamen) 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.

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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	Remark
N/A		

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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 $FS = Field Strength in dB\mu V/m$

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 dB μ V 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 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

 $RA = 62.0 dB\mu V$

AF = 7.4 dB

CF = 1.6 dB

AG = 29.0 dB

PD = 0 dB

AV = -10 dB

 $FS = 62 + 7.4 + 1.6 - 29 + 0 = 42 \, dB\mu V/m$

Level in $\mu V/m = Common Antilogarithm [(42 dB<math>\mu V/m)/20] = 125.9 \mu V/m$

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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 33.880 MHz

Judgement: Passed by 17.0 dB

TEST PERSONNEL:

Sign on file

Jeff Liang, Engineer
Typed/Printed Name

April 13, 2020 Date

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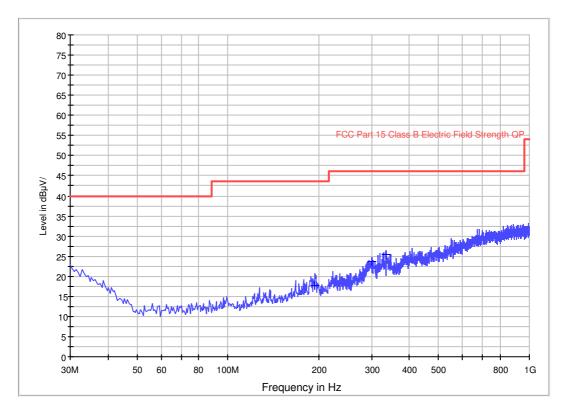
Applicant: Zaidtek Electronic Technology (Xiamen) Co., Ltd.

Date of Test: April 13, 2020 Model: HM8126

Worst Case Operating Mode: Transmitting

ANT Polarity: Horizontal

FCC Part 15



Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
194.900000	17.6	1000.0	120.000	100.0	Н	12.9	25.9	43.5
300.145000	23.8	1000.0	120.000	100.0	Н	16.8	22.2	46.0
334.095000	25.3	1000.0	120.000	100.0	Н	17.8	20.7	46.0

Remark:

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. QuasiPeak (dB μ V/m)= Corr. (dB/m)+ Read Level (dB μ V)
- 3. Margin (dB) = Limit Line(dB μ V/m) Level (dB μ V/m)

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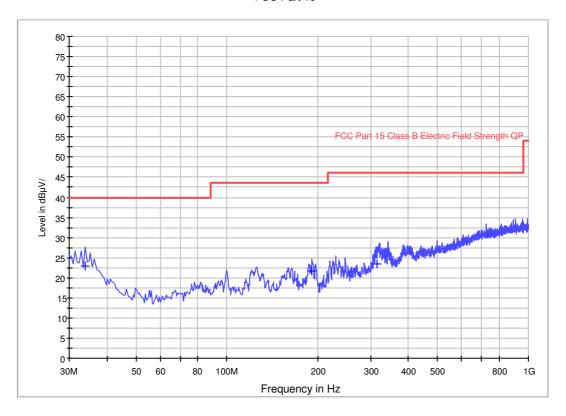
Applicant: Zaidtek Electronic Technology (Xiamen) Co., Ltd.

Date of Test: April 13, 2020 Model: HM8126

Worst Case Operating Mode: Transmitting

ANT Polarity: Vertical

FCC Part 15



Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
33.880000	23.0	1000.0	120.000	100.0	V	16.3	17.0	40.0
191.505000	21.6	1000.0	120.000	100.0	V	12.9	21.9	43.5
315.665000	23.4	1000.0	120.000	100.0	V	17.3	22.6	46.0

Remark:

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. QuasiPeak ($dB\mu V/m$)= Corr. (dB/m)+ Read Level ($dB\mu V$)
- 3. Margin (dB) = Limit Line(dB μ V/m) Level (dB μ V/m)

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4.1.4 Transmitter Spurious Emissions (Radiated)

Worst Case Radiated Emission at 2398.750 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 2.9 dB

TEST PERSONNEL:

Sign on file

<u>Jeff Liang, Engineer</u> *Typed/Printed Name*

April 13, 2020 Date

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Applicant: Zaidtek Electronic Technology (Xiamen) Co., Ltd.

Date of Test: April 13, 2020 Model: HM8126 Worst Case Operating Mode: Transmitting

Table 1

Radiated Emissions

(2405MHz)

			(· · · · · - /			
Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak	Margin
	(MHz)	(dBμV)	Amp Gain	Factor (dB)	at 3m (dBµV/m)	Limit at 3m	(dB)
			(dB)	(db)	(αΔμ ν/ιιι)	(dBµV/m)	
Horizontal	2405.000	95.9	36.7	28.1	87.3	114.0	-26.7
Horizontal	4810.000	56.4	36.7	35.5	55.2	74.0	-18.8
Horizontal	7215.000	62.6	36.1	36.5	63.0	74.0	-11.0
Horizontal	9620.000	53.8	36.2	37.0	54.6	74.0	-19.4

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	2405.000	88.7	36.7	28.1	80.1	94.0	-13.9
Horizontal	4810.000	41.8	36.7	35.5	40.6	54.0	-13.4
Horizontal	7215.000	47.8	36.1	36.5	48.2	54.0	-5.8
Horizontal	9620.000	45.6	36.2	37.0	46.4	54.0	-7.6

Notes: 1. Peak detector is used for the emission measurement (RBW=1MHz / VBW=3MHz for Peak value, and RBW=1MHz / VBW=10Hz for Average value; RBW=3MHz is used for fundamental emission measurement).

- 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.

Test Engineer: Jeff Liang

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Applicant: Zaidtek Electronic Technology (Xiamen) Co., Ltd.

Date of Test: April 13, 2020 Model: HM8126 Worst Case Operating Mode: Transmitting

Table 2

Radiated Emissions

(2442MHz)

			,	,			
Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m	Margin (dB)
			(dB)	(db)	(ασμν/ιιι)	(dBµV/m)	
Horizontal	2442.000	95.7	36.7	28.1	87.1	114.0	-26.9
Horizontal	4884.000	52.8	36.7	35.5	51.6	74.0	-22.4
Horizontal	7326.000	54.3	36.1	37.2	55.4	74.0	-18.6
Horizontal	9768.000	51.3	36.2	37.0	52.1	74.0	-21.9

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBuV/m)	Margin (dB)
Horizontal	2442.000	88.4	36.7	28.1	79.8	94.0	-14.2
Horizontal	4884.000	39.9	36.7	35.5	38.7	54.0	-15.3
Horizontal	7326.000	45.4	36.1	37.2	46.5	54.0	-7.5
Horizontal	9768.000	44.6	36.2	37.0	45.4	54.0	-8.6

Notes: 1. Peak detector is used for the emission measurement (RBW=1MHz / VBW=3MHz for Peak value, and RBW=1MHz / VBW=10Hz for Average value; RBW=3MHz is used for fundamental emission measurement).

- 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.

Test Engineer: Jeff Liang

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Applicant: Zaidtek Electronic Technology (Xiamen) Co., Ltd.

Date of Test: April 13, 2020 Model: HM8126 Worst Case Operating Mode: Transmitting

Table 3

Radiated Emissions

(2474MHz)

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)
Vertical	2474.000	99.9	36.7	28.1	91.3	114.0	-22.7
Vertical	4948.000	53.5	36.7	35.5	52.3	74.0	-21.7
Vertical	7422.000	54.0	36.1	37.2	55.1	74.0	-18.9
Vertical	9896.000	50.6	36.3	38.9	53.2	74.0	-20.8

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)
Vertical	2474.000	92.7	36.7	28.1	84.1	94.0	-9.9
Vertical	4948.000	39.1	36.7	35.5	37.9	54.0	-16.1
Vertical	7422.000	45.1	36.1	37.2	46.2	54.0	-7.8
Vertical	9896.000	42.9	36.3	38.9	45.5	54.0	-8.5

Notes: 1. Peak detector is used for the emission measurement (RBW=1MHz / VBW=3MHz for Peak value, and RBW=1MHz / VBW=10Hz for Average value; RBW=3MHz is used for fundamental emission measurement).

- 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.

Test Engineer: Jeff Liang

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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 <u>Technical Specifications</u>

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

8.0 <u>Instruction Manual</u>

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.

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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 below plots, 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

Bandedge compliance is determined by applying marker-delta method, i.e (Bandedge Plot).

(i) Lowest frequency channel (2405MHz):

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	2398.750	79.2	36.7	28.1	70.6	74.0	-3.4

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	2398.750	59.7	36.7	28.1	51.1	54.0	-2.9

(ii) Highest frequency channel (2474MHz):

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	2494.506	70.8	36.7	28.1	62.2	74.0	-11.8

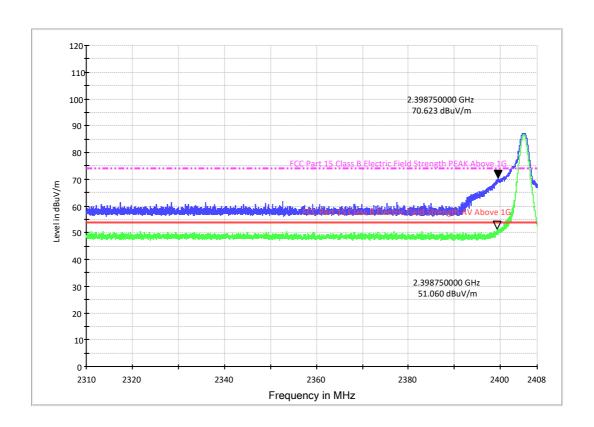
Polarization	Frequency (MHz)	Reading (dBμV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2494.506	58.7	36.7	28.1	50.1	54.0	-3.9

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).

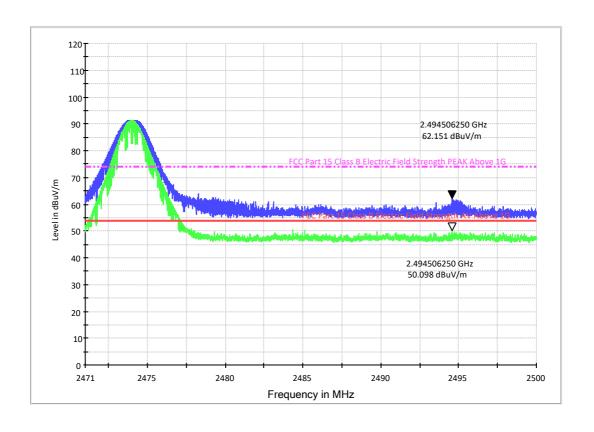
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Lowest frequency Channel

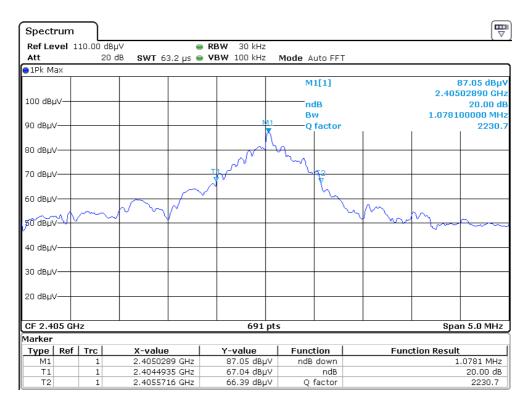


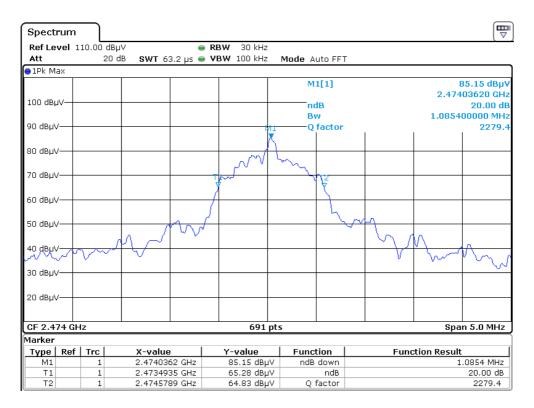
Highest frequency Channel



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.







9.3 Discussion of Pulse Desensitization

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Pulse desensitivity is not applicable for this device since the transmitter transmits the RF signal continuously.

9.4 Transmitter Duty Cycle Calculation, FCC Rule 15.35(b, c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SWEP function on the analyzer was set to ZERO SPAN. The Transmitter ON time was determined from the resultant time-amplitude display:

	See attached spectrum analyzer chart (s) for Transmitter timing
	See Transmitter timing diagram provided by manufacturer
Х	Not applicable, duty cycle was not used.

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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 adjust 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.

Detector function for conducted emissions is in QP & AV mode and IFBW setting is 9 kHz from the frequency band 150 kHz to 30MHz.

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9.5 Emissions Test Procedures (cont'd)

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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.

Conducted measurements are made as described in ANSI C63.10 - 2013.

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. 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.

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10.0 <u>Test Equipment List</u>

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-12	Biconilog Antenna	ETS	3142E	00166158	14-Sep-2018	14-Sep-2020
SZ061-08	Horn Antenna	ETS	3115	00092346	7-Sep-2019	7-Sep-2021
SZ061-07	Pyramidal Horn Antenna	ETS	3160-09	00083067	13-Aug-2019	13-Aug-2021
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	24-May-2019	24-May-2021
SZ056-03	SZ056-03 Spectrum Analyzer		FSP30	101148	28-May-2019	28-May-2020
SZ185-01	SZ185-01 EMI Receiver SZ181-04 Preamplifier SZ188-01 Anechoic Chamber SZ062-02 RF Cable SZ062-05 RF Cable SZ062-12 RF Cable SZ067-04 Notch Filter		ESCI	100547	24-Dec-2019	24-Dec-2020
SZ181-04			8449B	3008A024 74	5-Jul-2019	5-Jul-2020
SZ188-01			RFD-F/A- 100	4102	15-Dec-2018	15-Dec-2020
SZ062-02			RG 213U		16-Dec-2019	16-Jun-2020
SZ062-05			0.04- 26.5GHz		26-Feb-2019	26-Aug-2020
SZ062-12			0.04- 26.5GHz		26-Feb-2019	26-Aug-2020
SZ067-04			BRM5070 2-02		28-May-2019	28-May-2020

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