

SYBER SENSE IOT COMPANY LIMITED

TEST REPORT

SCOPE OF WORK

FCC TESTING-XPT01-E-1433-00

REPORT NUMBER

230411028SZN-001

ISSUE DATE

June 13, 2023

[REVISED DATE]

PAGES

22

DOCUMENT CONTROL NUMBER

FCC ID 231_a © 2017 INTERTEK





101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen.

Tel: (86 755) 8601 6288 Fax: (86 755) 8601 6751 www.intertek.com

Intertek Report No.: 230411028SZN-001

SYBER SENSE IOT COMPANY LIMITED

Application For Certification

FCC ID: 2AVDC-XPT01E1433

Wireless/Wired Sensor Translator

Model: XPT01-E-1433-00

Transmitter

Report No.: 230411028SZN-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 [10-1-21]

Prepared and Checked by:	Approved by:
Robin Zhou	Ryan Chen
Senior Project Engineer	Project Engineer
	Date: June 13, 2023

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Intertek Testing Service Shenzhen Ltd. Longhua Branch

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

Version: 01-November-2017 Page: 1 of 22 FCC ID 231 a



MEASUREMENT/TECHNICAL REPORT

This report concerns (check one)	Original Grant	X	_ Class II Ch	nange _	
Equipment Type: <u>DSR - Part 15 Remot</u>	te Control/Secur	rity Device	Transceiver	<u>r</u>	.
Deferred grant requested per 47 CFR (0.457(d)(1)(ii)?	Yes		 No	X
		If yes	, defer until	l:	
Constant North Constant Constant	S			da	ate
Company Name agrees to notify the C	commission by: _		late		
	nt of the produc	t so that t	he grant car	n be issu	ied on
of the intended date of announcement that date. Transition Rules Request per 15.37?	nt of the produc		he grant car		
that date.		Yes		No	X
Transition Rules Request per 15.37? If no, assumed Part 15, Subpart C for		Yes		No	X

Version: 01-November-2017 Page: 2 of 22 FCC ID 231_a

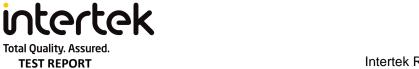


Table of Contents

1.0	Summary of Test results	4
2.0	General Description	5
2.1 2.2 2.3 2.4	Product Description Related Submittal(s) Grants Test Methodology Test Facility	5 5
<u>3.0</u>	System Test Configuration	6
3.1 3.2 3.3 3.5 3.5 3.6	Justification EUT Exercising Software Special Accessories Equipment Modification Measurement Uncertainty Support Equipment List and Description	6 6 7
<u>4.0</u>	Emission Results	8
4.1 4.1.1 4.1.2 4.1.3 4.2	Radiated Emission Configuration Photograph	8 9 9
5.0	Equipment Photographs	14
6.0	Product Labelling	14
7.0	Technical Specifications	14
8.0	Instruction Manual	14
9.0	Miscellaneous Information	15
9.1 9.2 9.3 9.4	Timing Plot Measured Bandwidth Discussion of Pulse Desensitization Emissions Test Procedures	18 19
10.0	Test Equipment List	22



1.0 Summary of Test results

Applicant: SYBER SENSE IOT COMPANY LIMITED

Applicant Address: FLAT/RM 10 BLK A 16/F HI TECH INDUSTRIAL CENTRE 5-21 PAK TIN PAR

STREET TSUEN WAN, Hong Kong, China

Manufacturer: SYBER SENSE IOT COMPANY LIMITED

Manufacturer Address: FLAT/RM 10 BLK A 16/F HI TECH INDUSTRIAL CENTRE 5-21 PAK TIN

PAR STREET TSUEN WAN, Hong Kong, China

Wireless/Wired Sensor Translator

Model: XPT01-E-1433-00

FCC ID: 2AVDC-XPT01E1433

TEST ITEM	REFERENCE	RESULTS
AC Conducted Emission	15.207	Pass
Transmitter Field Strength	15.231(b) &15.205	Pass
Bandwidth	15.231(c)	Pass
Timing Requirement	15.231(a)(2) 15.231(a)(3)	Pass

Notes: 1. The EUT uses an Internal Integral Antenna which in accordance to Section 15.203 is considered sufficient to comply with the provisions of this section.

Version: 01-November-2017 Page: 4 of 22 FCC ID 231_a



2.0 General Description

2.1 Product Description

The Equipment Under Test (EUT) is a Wireless/Wired Sensor Translator operating at 433.95MHz.

Intertek Report No.: 230411028SZN-001

The EUT is powered by 12V-1A (Internal Li-ion battery:3.7V-,2000mAh,7.400Wh). For more detailed features description, please refer to the user's manual.

Antenna Type: Internal Integral Antenna

Modulation: OOK

Antenna Gain: -1.85dBi 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: DSR- Part 15 Remote Control/Security Device Transceiver (433.95MHz transmitter portion).

Remaining portions are subject to the following procedures:

Receiver portion of 345MHz and Other Digital Function: Subject to FCC Part 15B SDOC (Report number: 230411028SZN-002).

2.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. 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.

2.4 Test Facility

The Semi-anechoic chamber and shielded room used to collect the radiated data and conducted data are **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 File Number: CN1188.

Version: 01-November-2017 Page: 5 of 22 FCC ID 231_a



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 12V=1A (Internal Li-ion battery:3.7V=,2000mAh,7.400Wh) by Adapter from AC 120V, 60Hz during the test.

The device support three modes (normal transmission, error detection mechanism and supervision transmission) and all modes have been tested. Only the worst case data was shown in the 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 emission at and above 30 MHz, 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 report in Exhibit 4.0.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was mounted to a plastic stand if necessary and placed on the styrene turntable, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

3.2 EUT Exercising Software

There was no special software to exercise the device.

3.3 Special Accessories

No special accessories used.

3.4 Equipment Modification

Any modifications installed previous to testing by SYBER SENSE IOT COMPANY 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.

Version: 01-November-2017 Page: 6 of 22 FCC ID 231_a



3.5 Measurement Uncertainty

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

3.6 Support Equipment List and Description

Description	Manufacturer	Model/ Cable length
Adaptor (Provided by Applicant)	SHENZHEN FUJIA APPLIANCE CO., LTD.	FJ-SW1261201000DU Undetachable DC Output Line: 145cm Input: 100-240V~ 50/60Hz 0.4A Max Output: 12V—1A
Passive Infrared Motion Sensor (Provided by Applicant)	Resideo Technologies, Inc	IS335
Door magnetic sensor (Provided by Applicant)	Mianyang Weibo Electronic Co., Ltd.	MC-31 Color: white
Door magnetic sensor (Provided by Applicant)	Mianyang Weibo Electronic Co., Ltd.	MC-31 Color: grey

Version: 01-November-2017 Page: 7 of 22 FCC ID 231_a



TEST REPORT Intertek Report No.: 230411028SZN-001

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 $dB\mu V$

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:

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

Example

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

RA = 62.0dBμV AF = 7.4 dB/m CF = 1.6dB AG = 29.0dB PD = 0dB AV = -10dB

FS = $62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32dB\mu V/m$

Level in $\mu V/m = Common Antilogarithm [(32dB<math>\mu V/m)/20] = 39.8 \mu V/m$

Version: 01-November-2017 Page: 8 of 22 FCC ID 231_a



4.1.2 Radiated Emission Configuration Photograph

For electronic filing, the worst case radiated emission configuration photographs are 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 433.95 MHz

Judgement: Passed by 2.1 dB

TEST PERSONNEL:

Sign on file

Robin Zhou, Senior Project Engineer
Typed/Printed Name

May 10, 2023 Date

Version: 01-November-2017 Page: 9 of 22 FCC ID 231_a



Applicant: SYBER SENSE IOT COMPANY LIMITED

Date of Test: May 10, 2023 Model: XPT01-E-1433-00

Worst Case Operating Mode: Transmitting (normal transmission)

Radiated Emissions (30MHz to 5GHz)

Freq.	Ant. Pol.	Reading PK	Pre- amp. gain	antenna factor	Emission Level (dBμV/m)		Limit (dBµV		Margin	(dB)	
(MHz)	H/V	(dBµV)	(dB)	(dB/m)	PK	AV Factor(dB)	AV	PK	AV	PK	AV
433.95	Н	75.4	/	23.3	98.7	-20.9	77.8	100.8	80.8	-2.1	-3.0
867.90	Н	29.6	/	28.9	58.5	-20.9	37.6	80.8	60.8	-22.3	-23.2
1301.85*	Н	41.8	36.1	25.1	30.8	-20.9	9.9	74.0	54.0	-43.2	-44.1
1735.80	Н	43.8	35.8	26.9	34.9	-20.9	14.0	80.8	60.8	-45.9	-46.8
2169.75	Н	39.1	35.4	28.4	32.1	-20.9	11.2	80.8	60.8	-48.7	-49.6
3905.55*	Н	50.3	34.2	31.2	47.3	-20.9	26.4	74.0	54.0	-26.7	-27.6
4339.50*	Н	45.1	33.9	31.7	42.9	-20.9	22.0	74.0	54.0	-31.1	-32.0

NOTES: 1. Peak Detector Data unless otherwise stated.

- 2. All measurements were made at 3-meter. Harmonic emissions not detected at the 3-meter distances 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, the preamplifier is used for frequencies above 1 GHz only.
- 5. "*" Emission within restricted band fulfils the requirement of section 15.205.
- 6. AV factor (dB)= 20log (duty cycle) 20log (Duty cycle) = 20log (0.0903) = -20.9dB

Version: 01-November-2017 Page: 10 of 22 FCC ID 231_a



Applicant: SYBER SENSE IOT COMPANY LIMITED

Date of Test: April 23, 2023 Model: XPT01-E-1433-00

4.2 Conducted Emission

Simultaneous transmission was considered during the test, only the worst-case data is recorded in this report.

Worst Case Conducted Emission at 0.158000MHz is passed by 22.6dB margin.

For the electronic filing, the worst case radiated emission configuration photographs are saved with filename: conducted photos.pdf.

Version: 01-November-2017 Page: 11 of 22 FCC ID 231_a



Applicant: SYBER SENSE IOT COMPANY LIMITED

Date of Test: April 23, 2023 Model: XPT01-E-1433-00

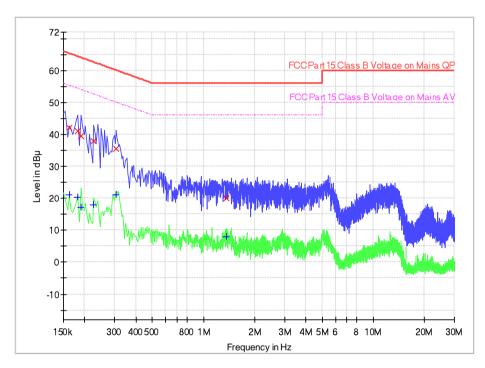
Worst Case Operating Mode: Transmitting (normal transmission)

Phase: Live

Graphic / Data Table

Conducted Emissions Pursuant to FCC 15.207: Emissions Requirement

Conducted Emission TestFCC Part 15



Limit and Margin QP

Frequency (MHz)	Quasi Peak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.162000	42.2	9.000	L	9.6	23.2	65.4
0.182000	41.0	9.000	L	9.6	23.4	64.4
0.190000	39.6	9.000	L	9.6	24.4	64.0
0.226000	38.0	9.000	L	9.6	24.6	62.6
0.306000	35.7	9.000	L	9.7	24.4	60.1
1.362000	20.1	9.000	L	9.7	35.9	56.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV
0.162000	21.2	9.000	L	9.6	34.2	55.4
0.182000	20.4	9.000	L	9.6	34.0	54.4
0.190000	17.1	9.000	L	9.6	36.9	54.0
0.226000	18.1	9.000	L	9.6	34.5	52.6
0.306000	21.0	9.000	L	9.7	29.0	50.1
1.362000	8.0	9.000	L	9.7	38.0	46.0

Remark:

- 1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
- 2. Margin (dB) = Limit (dB μ V) Level (dB μ V)

Version: 01-November-2017 Page: 12 of 22 FCC ID 231_a



Applicant: SYBER SENSE IOT COMPANY LIMITED

Date of Test:April 23, 2023 Model: XPT01-E-1433-00

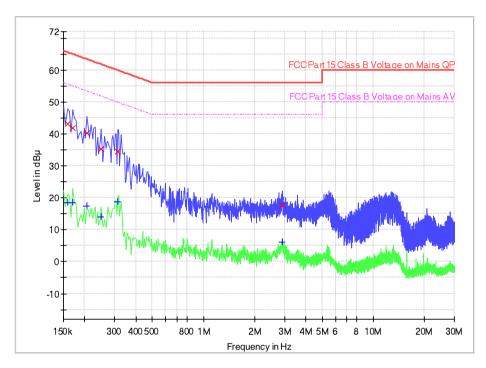
Worst Case Operating Mode: Transmitting (normal transmission)

Phase: Neutral

Graphic / Data Table

Conducted Emissions Pursuant to FCC 15.207: Emissions Requirement

Conducted Emission TestFCC Part 15



Limit and Margin QP

	<u> </u>					
Frequency (MHz)	Quasi Peak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	43.0	9.000	N	9.6	22.6	65.6
0.170000	41.8	9.000	N	9.6	23.2	65.0
0.206000	40.3	9.000	N	9.6	23.1	63.4
0.250000	35.4	9.000	N	9.6	26.4	61.8
0.314000	34.5	9.000	N	9.6	25.4	59.9
2.910000	17.7	9.000	N	9.7	38.3	56.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	18.6	9.000	N	9.6	37.0	55.6
0.170000	18.4	9.000	N	9.6	36.6	55.0
0.206000	17.4	9.000	N	9.6	36.0	53.4
0.250000	14.1	9.000	N	9.6	37.7	51.8
0.314000	18.6	9.000	N	9.6	31.3	49.9
2.910000	6.1	9.000	N	9.7	39.9	46.0

Remark:

- 1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
- 2. Margin (dB) = Limit (dB μ V) Level (dB μ V)

Version: 01-November-2017 Page: 13 of 22 FCC ID 231_a



TEST REPORT Intertek Report No.: 230411028SZN-001

5.0 **Equipment Photographs**

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

6.0 Product Labeling

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

7.0 Technical Specifications

For electronic filing, the block diagram and circuit diagram 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.

Version: 01-November-2017 Page: 14 of 22 FCC ID 231_a



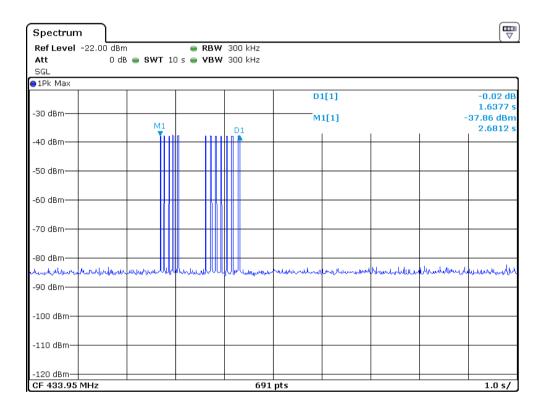
9.0 Miscellaneous Information

This miscellaneous information includes details of the measured bandwidth, the test procedure, calculation of timing requirements and pulse desensitization.

9.1 Timing Plot – Pursuant to FCC Part 15 Section 15.231(a)(2), 15.231(a)(3)

9.1.1 FCC Part 15 Section 15.231(a)(2)

Mode	Limit seconds	Verdict
Transmitting (normal transmission)	<5	PASS



Note: The emission was found to cease within 5 seconds after activation.

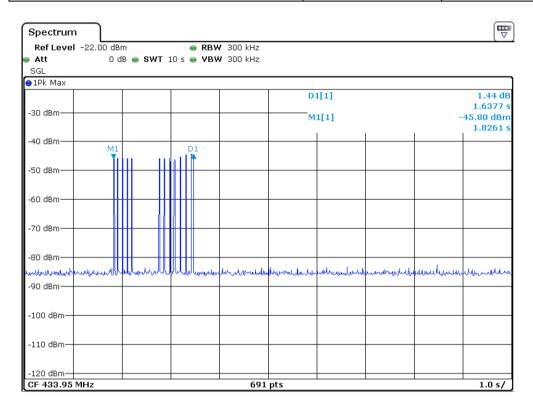
Result: Meet the requirements of FCC Part 15 Section 15.231(a)(2)

Version: 01-November-2017 Page: 15 of 22 FCC ID 231_a



9.1.2 FCC Part 15 Section 15.231(a)(2)

Mode	Limit seconds	Verdict
Transmitting (error detection mechanism)	<5	PASS



Note:

- i. The "Heartbeat Interval" described in the user manual is the time intervals of check its MCU memory.
- ii. This device will check its MCU memory every 60 minutes in normal working state.
- iii. If the paired sensors recorded in MCU memory are in a normal working state, the error detection mechanism will not execute. Therefore, the 433MHz signal will not be sent.
- iv. The error detection mechanism will only execute when the paired sensors recorded in MCU memory are in an abnormal state, then the device's program will enter error state, at the same time it sends a 433MHz signal.
- v. After the device enters the error state, it will not check its MCU memory and will not send another 433MHz signal. The device will not work normal until the user successfully pair the sensor defined as abnormal.
- vi. The time of transmission is 1.6377 seconds which within 5 seconds.

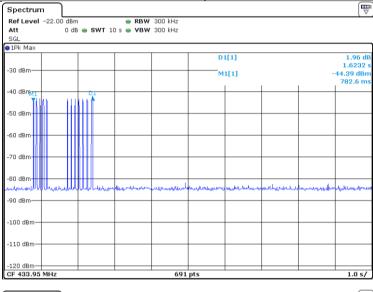
Result: Meet the requirements of FCC Part 15 Section 15.231(a)(2)

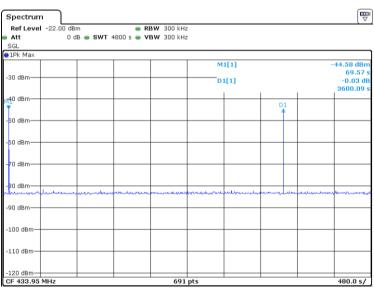
Version: 01-November-2017 Page: 16 of 22 FCC ID 231_a



9.1.3 FCC Part 15 Section 15.231(a)(3)

Mode	Limit Seconds per hour	Verdict
Transmitting (supervision transmission)	<2	PASS





Note:

- i. The supervision transmission is a periodic transmission at regular predetermined intervals used in security or safety applications.
- ii. The "Heartbeat Interval" described in the user manual is the regular predetermined intervals of supervision transmission.
- iii. The supervision interval is 60 minutes, and only one pulse train will be sent within 60 minutes.
- iv. The time of a single pulse chain is 1.6232s, the total transmission time is within 2 seconds per hour.

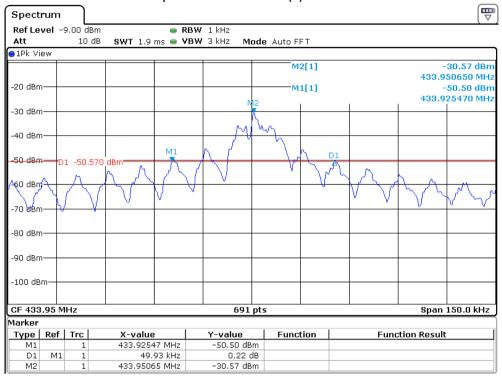
Result: Meet the requirements of FCC Part 15 Section 15.231(a)(3)

Version: 01-November-2017 Page: 17 of 22 FCC ID 231_a



9.2 Measured Bandwidth

From the plot, the maximum 20dB bandwidth is 49.93 kHz and less than the limit of 1.0848MHz. It fulfils the requirement of 15.231(c).

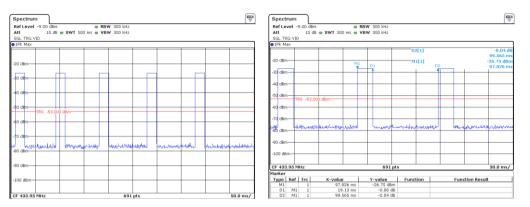


Version: 01-November-2017 Page: 18 of 22 FCC ID 231_a



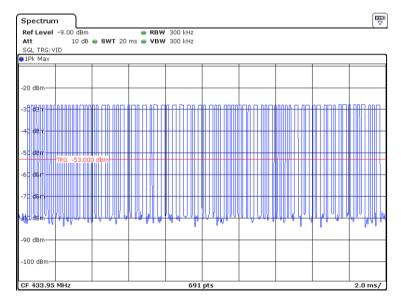
9.3 Discussion of Pulse Desensitization

The effective period (T_{eff}) is approximately 8.9878ms for a digital "1" bit which illustrated on technical specification. With a resolution bandwidth (3 dB) of 1 MHz, the pulse desensitivity factor was -20.9 dB.



Observation period 1

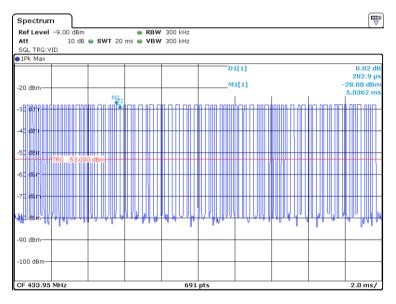
Observation period 2 (Single pulse cycle is 99.565ms)

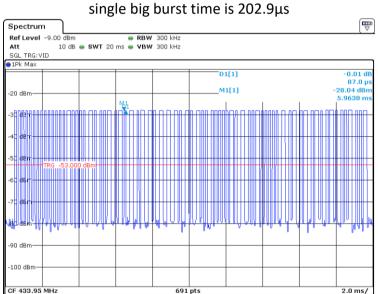


1 pulse train has 52 single small bursts and 22 single big bursts

Version: 01-November-2017 Page: 19 of 22 FCC ID 231_a







single small burst time is $87\mu s$

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

The observation time = 99.565msThe effective period (T_{eff}) = 8.9878ms ($202.9\mu s*22+87.0\mu s*52=8.9878ms$) DC = 8.9878ms / 99.565ms = 0.0903 or 9.03%

Therefore, the averaging factor is found by $20 \log_{10} (0.0903) = -20.9 dB$

Version: 01-November-2017 Page: 20 of 22 FCC ID 231_a



9.4 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.

Intertek Report No.: 230411028SZN-001

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, up to 1GHz 0.8m and above 1GHz 1.5m 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 based on the use of measurement instrumentation with a CISPR quasi-peak detector.

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.

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. Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

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.

Version: 01-November-2017 Page: 21 of 22 FCC ID 231_a



10.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-12	Biconilog Antenna	ETS	3142E	00166158	2021-08-04	2024-08-04
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	2021-05-18	2023-05-18
SZ061-08	Horn Antenna	ETS	3115	00092346	2021-09-05	2024-09-05
SZ056-06	Signal Analyzer	R&S	FSV 40	101101	2022-12-19	2023-12-19
SZ185-03	EMI Receiver	R & S	ESCI	100547	2022-12-26	2023-12-26
SZ181-04	Preamplifier	Agilent	8449B	3008A024 74	2022-05-16	2023-05-16
SZ188-01	Anechoic Chamber	ETS	RFD-F/A- 100	4102	2021-12-12	2024-12-12
SZ062-02	RF Cable	RADIALL	RG 213U		2022-11-20	2023-05-20
SZ062-05	RF Cable	RADIALL	0.04- 26.5GHz		2022-11-20	2023-05-20
SZ062-12	RF Cable	RADIALL	0.04- 26.5GHz	-	2022-11-20	2023-05-20
SZ187-02	Two-Line V- Network	R&S	ENV216	100073	2022-05-09	2023-05-09
SZ185-02	EMI Receiver	R & S	ESCI	100692	2022-07-08	2023-07-08
SZ188-03	Shielding Room	ETS	RFD-100	4100	2022-12-20	2025-12-20

Version: 01-November-2017 Page: 22 of 22 FCC ID 231_a