Measurement of RF Emissions from a Model No. 001D7922-1 Universal Garage Door Remote Transmitter

For	Chamberlain Group, Inc. 300 Windsor Dr Oak Brook, IL 60523
P.O. Number	4900067654
Date Tested	February 25 - 28, 2020
Test Personnel	Tylar Jozefczyk
Test Specification	FCC "Code of Federal Regulations" Title 47 Part15, Subpart C Industry Canada RSS-GEN Industry Canada RSS-210

Test Report By:

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Requested By: Andrew Marks
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Approved By:

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Engineer of Illinois - 44894

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REVISION HISTORY

Revision	Date	Description
—	27 Mar 2020	Initial release

Measurement of RF Emissions from a Universal Garage Door Remote, Model No. 001D7922-1 Transmitter

1. INTRODUCTION

1.1. Scope of Tests

This report presents the results of the RF emissions measurements performed on a Universal Garage Door Remote, Model No. 001D7922-1 (hereinafter referred to as the Equipment Under Test (EUT)). The EUT was designed to transmit in the 300-390MHz range using an integral antenna. The EUT was manufactured and submitted for testing by Chamberlain Group, Inc. located in Oak Brook, IL.

1.2. Purpose

The test series was performed to determine if the EUT meets the conducted and radiated RF emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.231 for Intentional Radiators. Testing was performed in accordance with ANSI C63.4-2014.

1.3. Deviations, Additions and Exclusions

There were no deviations, additions to, or exclusions from the test specification during this test series.

1.4. EMC Laboratory Identification

This series of tests was performed by Elite Electronic Engineering Incorporated of Downers Grove, Illinois. The laboratory is accredited by The American Association for Laboratory Accreditation (A2LA). A2LA Certificate Number: 1786.01.

1.5. Laboratory Conditions

The temperature at the time of the test was 21.5°C and the relative humidity was 14%.

2. APPLICABLE DOCUMENTS

The following documents of the exact issue designated form part of this document to the extent specified herein:

- Federal Communications Commission "Code of Federal Regulations", Title 47, Part 15, Subpart C
- ANSI C63.4-2014, "American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz"
- Industry Canada Radio Standards Specification, RSS-Gen, “General Requirements for Compliance of Radio Apparatus”, Issue 5, March 2019
- Industry Canada Radio Standards Specification, RSS-210, “License-Exempt Radio Apparatus: Category I Equipment”, Issue 10, December 2019

3. EUT SETUP AND OPERATION

3.1. General Description

The EUT is a Chamberlain Group, Inc. Universal Garage Door Remote, Model No. 001D7922-1. A block diagram of the EUT setup is shown as Figure 1.

3.1.1.Power Input

The EUT obtained 3VDC from a cell battery.

3.1.2.Grounding

Since the EUT was powered with 3VDC from a cell battery, it was ungrounded during the tests.

3.2. Operational Mode

For all tests the EUT was placed on an 80cm high non-conductive stand and was energized.

Mode	Description
Tx	The EUT was powered on and set to transmit at one of the following frequencies: - 303MHz (Guardian Fix Code) - 310MHz (Secure Code and Rolling Code) - 315MHz (Rolling Code D and IntelliCode) - 318MHz (Mega Code) - 372.5MHz (Rolling Code) - 390MHz (Rolling Code D, IntelliCode, and Billion Code A) There was also the following transmit mode that had 3 different frequencies transmitting at one time: - 310MHz, 315MHz, and 390MHz (Rolling Code E)
Single Click	The EUT was powered on and the transmit button was pushed. (Only used for Periodic Operations test.)

3.3. EUT Modifications

No modifications were required for compliance to the FCC 15.231 requirements.

4. TEST FACILITY AND TEST INSTRUMENTATION

4.1. Shielded Enclosure

All tests were performed in a 32ft. x 20ft. x 18ft. hybrid ferrite-tile/anechoic absorber lined test chamber. With the exception of the floor, the reflective surfaces of the shielded chamber are lined with ferrite tiles on the walls and ceiling. Anechoic absorber material is installed over the ferrite tile. The floor of the chamber is used as the ground plane. The chamber complies with ANSI C63.4-2014 for site attenuation.

4.2. Test Instrumentation

The test instrumentation and auxiliary equipment used during the tests are listed in Table 9-1.

Conducted and radiated emission measurements were performed with a spectrum analyzer. This receiver allows measurements with the bandwidths and detector functions specified by the FCC. The receiver bandwidth was 120kHz for the 30MHz to 1GHz radiated emissions data and 1MHz for the 1GHz to 4GHz radiated emissions data.

4.3. Calibration Traceability

Test equipment is maintained and calibrated on a regular basis. All calibrations are traceable to the National Institute of Standards and Technology (NIST).

4.4. Measurement Uncertainty

All measurements are an estimate of their true value. The measurement uncertainty characterizes, with a specified confidence level, the spread of values which may be possible for a given measurement system.

Values of Expanded Measurement Uncertainty (95% Confidence) are presented below:

Measurement Type	Expanded Measurement Uncertainty
Conducted disturbance (mains port) (150 kHz – 30 MHz)	2.7
Radiated disturbance (electric field strength on an open area test site or alternative test site) (30 MHz – 1000 MHz)	4.3
Radiated disturbance (electric field strength on an open area test site or alternative test site) (1 GHz – 6 GHz)	3.1
Radiated disturbance (electric field strength on an open area test site or alternative test site) (6 GHz – 18 GHz)	3.2

5. TEST PROCEDURES

5.1. Powerline Conducted Emissions

5.1.1.Requirements

Since the EUT was powered by internal batteries with no provisions for AC power, no conducted emissions tests are required.

5.2. Periodic Operation Measurements

5.2.1.Requirements

As stated in FCC 15.231(a) and RSS-210 A.1.1, a manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released. Also, a transmitter activated automatically shall cease transmission within 5 seconds after activation.

5.2.2.Procedures

The spectrum analyzer was setup to display the time domain trace. The EUT was set to transmit normally. The spectrum analyzer was used to record the amount of time that the EUT remained active following activation.

5.2.3.Results

The plot of the periodic timing is shown on data page 17. The data shows that the EUT ceases operation within the allotted time.

5.3. Duty Cycle Factor Measurements

5.3.1.Procedures

The duty cycle factor is used to convert peak detected readings to average readings. This factor is computed from the time domain trace of the pulse modulation signal. Since this EUT utilizes a rolling code modulation, the duty is calculated based on the worst case. The following procedure was used to measure a representative sample:

1) With the transmitter set up to transmit for maximum pulse density, the time domain trace is displayed on the spectrum analyzer.
2) The pulse width is measured and a plot of this measurement is recorded.
3) Next the number of pulses in the word period is measured and a plot is recorded.
4) Finally the length of the word period is measured and a third plot is recorded. If the word period exceeds 100msec, the word period is limited to 100msec.
5) The pulse width and number of pulses for the word period are used to compute the on-time. The duty cycle is then computed as the (on-time/ word period).
6) The duty cycle factor is computed from the duty cycle.

5.3.2. Results

The plots of the duty cycles for each code used at each frequency are shown on data pages 18 through 55. Since the plots were made for rolling codes, the duty cycle factor shown on the plots may not show the worst case but was found to be no greater than the worst case duty cycle factor.

5.4. Radiated Measurements

5.4.1.Requirements

The EUT must comply with the requirements of FCC "Code of Federal Regulations Title 47", Part 15, Subpart C, Section 15.205 et seq.

FCC 15.231(b) has the following radiated emission limits:

Frequency (MHz)	Field Strength of Fundamental (microvolts/meter)	Field Strength of Spurious Emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	[1]1,250 to 3,750	[1]125 to 375
174-260	3,750	375
260-470	[1] 3,750 to 12,500	[1]375 to 1,250
Above 470	12,500	1,250

[1] = Linear interpolations

In addition, emissions appearing in the Restricted Bands of Operation listed in paragraph 15.205(a) shall not exceed the general requirements shown in paragraph 15.209.

RSS-210 (A.1.2) has the following radiated emission limits:

Fundamental Frequency (MHz) – Excluding Restricted Frequency Bands Specified in RSS-Gen	Field Strength of Fundamental (microvolts/meter)
70-130	1,250
130-174	1,250 to 3,750[1]
174-260[1]	3,750
260-470[1]	3,750 to 12,500[1]
Above 470	12,500

[1] = Linear interpolation with frequency, f, in MHz:
For 130-174 MHz: Field Strength (μV/m) = (56.82 × f) − 6136
For 260-470 MHz: Field Strength (μV/m) = (41.67 × f) − 7083

All measurements are specified at a distance of 3 meters.

5.4.2.Procedures

All tests were performed in a 32ft. x 20ft. x 18ft. hybrid ferrite-tile/anechoic absorber lined test chamber. The walls and ceiling of the shielded chamber are lined with ferrite tiles. Anechoic absorber material is installed over the ferrite tile. The floor of the chamber is used as the ground plane. The chamber complies with ANSI C63.4-2014 for site attenuation.

The shielded enclosure prevents emissions from other sources, such as radio and TV stations from interfering with the measurements. All powerlines and signal lines entering the enclosure pass through filters on the enclosure wall. The powerline filters prevent extraneous signals from entering the enclosure on these leads.

A preliminary radiated emissions test was performed to determine the emission characteristics of the EUT. For the preliminary test, a broadband measuring antenna was positioned at a 3 meter distance from the EUT. The entire frequency range from 30MHz to 4GHz was investigated using a peak detector function. The data was

then processed by the computer to calculate equivalent field intensity.

The final open field emission tests were then manually performed over the frequency range of 30MHz to 4GHz. Between 30MHz and 1GHz, a tuned dipole antenna was used as the pick-up device. A broadband double ridged waveguide antenna was used as the pick-up device for all frequencies above 1GHz. All significant broadband and narrowband signals were measured and recorded. The peak detected levels were converted to average levels using a duty cycle factor which was computed from the pulse train.

To ensure that maximum or worst case, emission levels were measured, the following steps were taken:

1) The EUT was rotated so that all of its sides were exposed to the receiving antenna.
2) Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
3) The measuring antenna was raised and lowered from 1 to 4 meters for each antenna polarization to maximize the readings.
4) For hand-held or body-worn devices, the EUT was rotated through three orthogonal axes to determine which orientation produces the highest emission relative to the limit.

5.4.3.Results

The preliminary plots are presented on data pages 56 through 99. The plots are presented for a reference only, and are not used to determine compliance.

The final open area radiated levels are presented on data pages 100 through 112. As can be seen from the data, all emissions measured from the EUT were within the specification limits. The emissions level closet to the limit (worst case) occurred at 1117.5MHz (when testing the 372.5MHz frequency) and was 1.69dB within the limit. Photographs of the test configuration which yielded the highest or worst case radiated emission levels are shown on Figures 3 and 4.

5.5. Occupied Bandwidth Measurements

5.5.1.Requirement

In accordance with FCC 15.231(c), all emissions within 20dB of the peak amplitude level of the center frequency are required to be within a band less than 0.25% of the center frequency wide. Also, in accordance with RSS-210 A.1.3, the 99% bandwidth of momentarily operated devices shall be less than or equal to 0.25% of the center frequency for devices operating between 70MHz and 900MHz.

5.5.2.Procedures

The EUT was placed on an 80cm high non-conductive stand. The unit was set to transmit continuously. With an antenna positioned nearby, occupied bandwidth emissions were displayed on the spectrum analyzer. The resolution bandwidth was set to 30kHz and span was set to 2MHz. The frequency spectrum near the fundamental was plotted.

5.5.3.Results

The plots of the emissions near the fundamental frequency are presented on data pages 113 through 138. As can be seen from this data page, the transmitter met the occupied bandwidth requirements.

6. OTHER TEST CONDITIONS

6.1. Test Personnel and Witnesses

All tests were performed by qualified personnel from Elite Electronic Engineering Incorporated.

6.2. Disposition of the EUT

The EUT and all associated equipment were returned to Chamberlain Group, Inc. upon completion of the tests.

7. CONCLUSIONS

It was determined that the Chamberlain Group, Inc. Universal Garage Door Remote, Model No. 001D7922-1 did fully meet the conducted and radiated emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.231 et seq. for Intentional Radiators, when tested per ANSI C63.4-2014.

8. CERTIFICATION

Elite Electronic Engineering Incorporated certifies that the information contained in this report was obtained under conditions which meet or exceed those specified in the test specifications.

The data presented in this test report pertains to the EUT at the test date. Any electrical or mechanical modification made to the EUT subsequent to the specified test date will serve to invalidate the data and void this certification.

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the Federal Government.

9. EQUIPMENT LIST

Table 9-1 Equipment List

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Due Date
CDX8	COMPUTER	ELITE	WORKSTATION			N/A	
NTA4	BILOG ANTENNA	TESEQ	6112D	46660	20-2000GHZ	9/23/2019	9/23/2020
NWQ1	DOUBLE RIDGED WAVEGUIDE ANTENNA	ETS-LINDGREN	3117	66655	1GHZ-18GHZ	4/10/2018	4/10/2020
PHA0	MAGNETIC FIELD PROBE	ELECTRO-METRICS	EM-6882	134	22-230MHZ	NOTE 1	
RBG2	EMI ANALYZER	ROHDE & SCHWARZ	ESW44	101591	2HZ-44GHZ	3/23/2020	3/23/2021
WKA1	SOFTWARE, UNIVERSAL RCV EMI	ELITE	UNIV_RCV_EMI	1	---	I/O	

I/O: Initial Only
N/A: Not Applicable
Note 1: For the purpose of this test, the equipment was calibrated over the specified frequency range, pulse rate, or modulation prior to the test or monitored by a calibrated instrument.

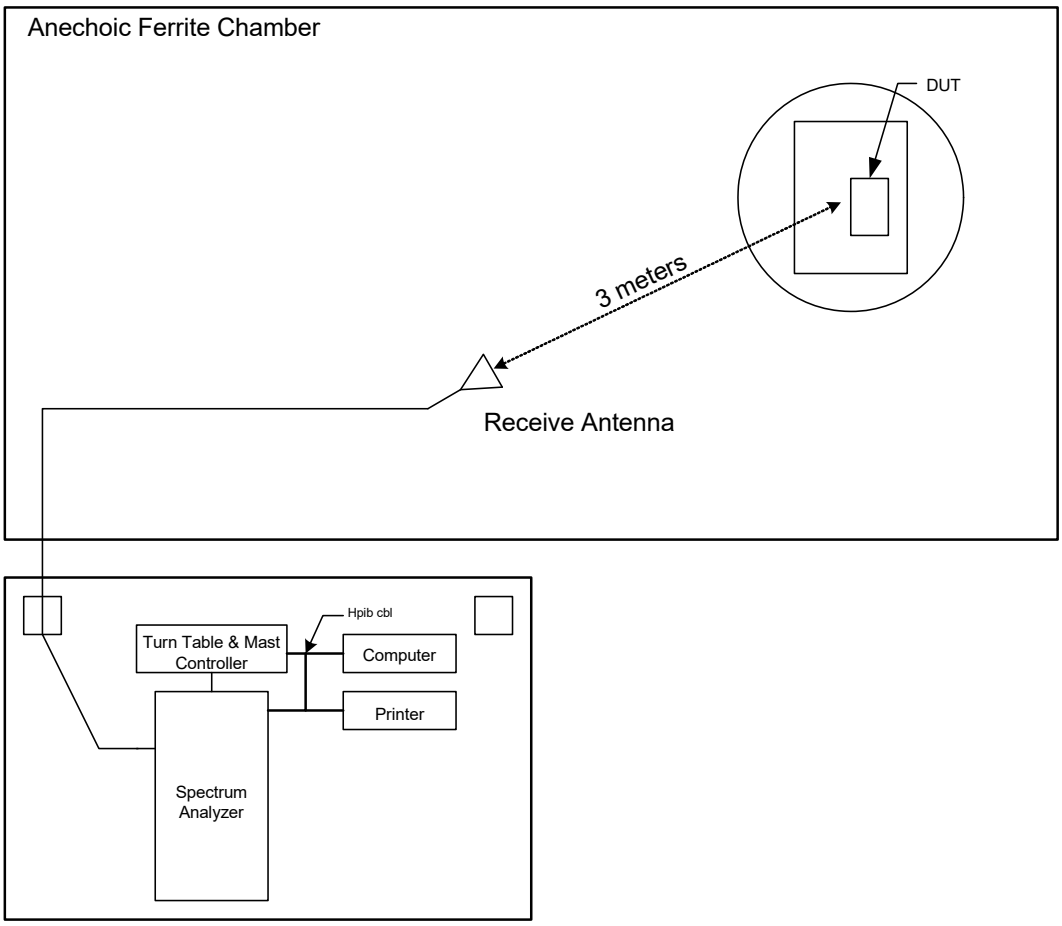


FIGURE 1 BLOCKDIAGRAM OF TEST SETUP

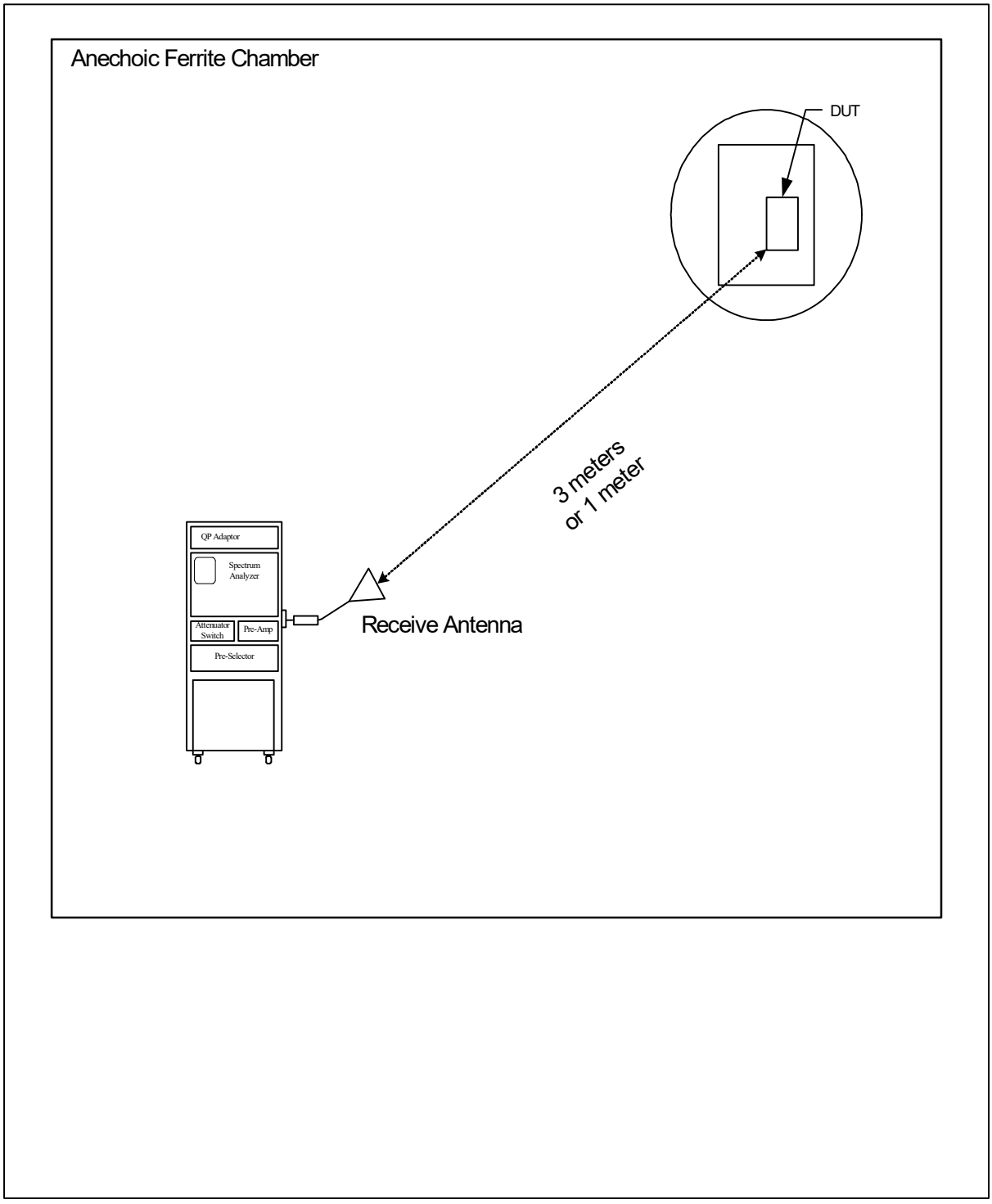
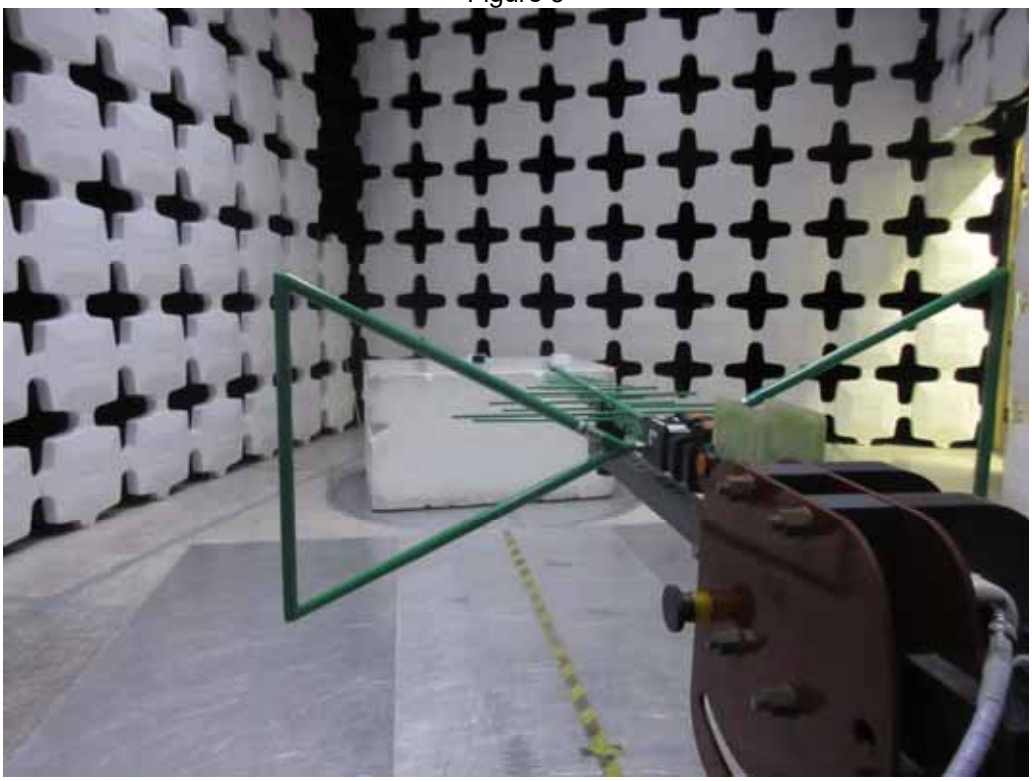

Anechoic Ferrite Chamber
DUT
3 meters
or 1 meter
QP Adaptor
Spectrum Analyzer
Attenuator Switch
Pre-Amp
Pre-Selector
Receive Antenna

Figure 2

Test Item

Test Item

Figure 3



Test Setup for Radiated Emissions, 30MHz to 1GHz – Horizontal Polarization

Test Setup for Radiated Emissions, 30MHz to 1GHz – Vertical Polarization

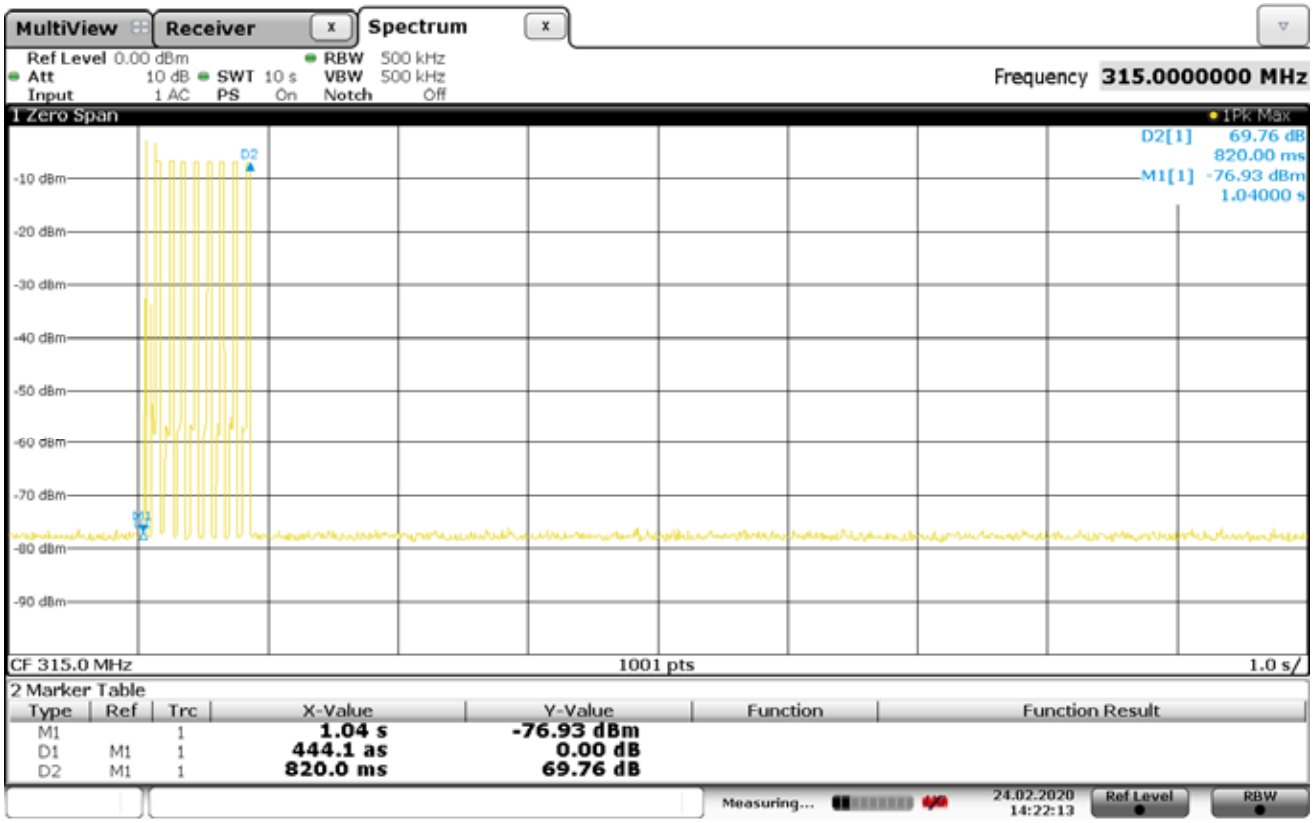
Figure 4

Test Setup for Radiated Emissions, 1 to 4GHz – Horizontal Polarization

Test Setup for Radiated Emissions, 1 to 4GHz – Vertical Polarization

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Periodic Operation Measurement
MODE	Single Click
DATE TESTED	February 24, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Periodic Operation time = 375.9ms

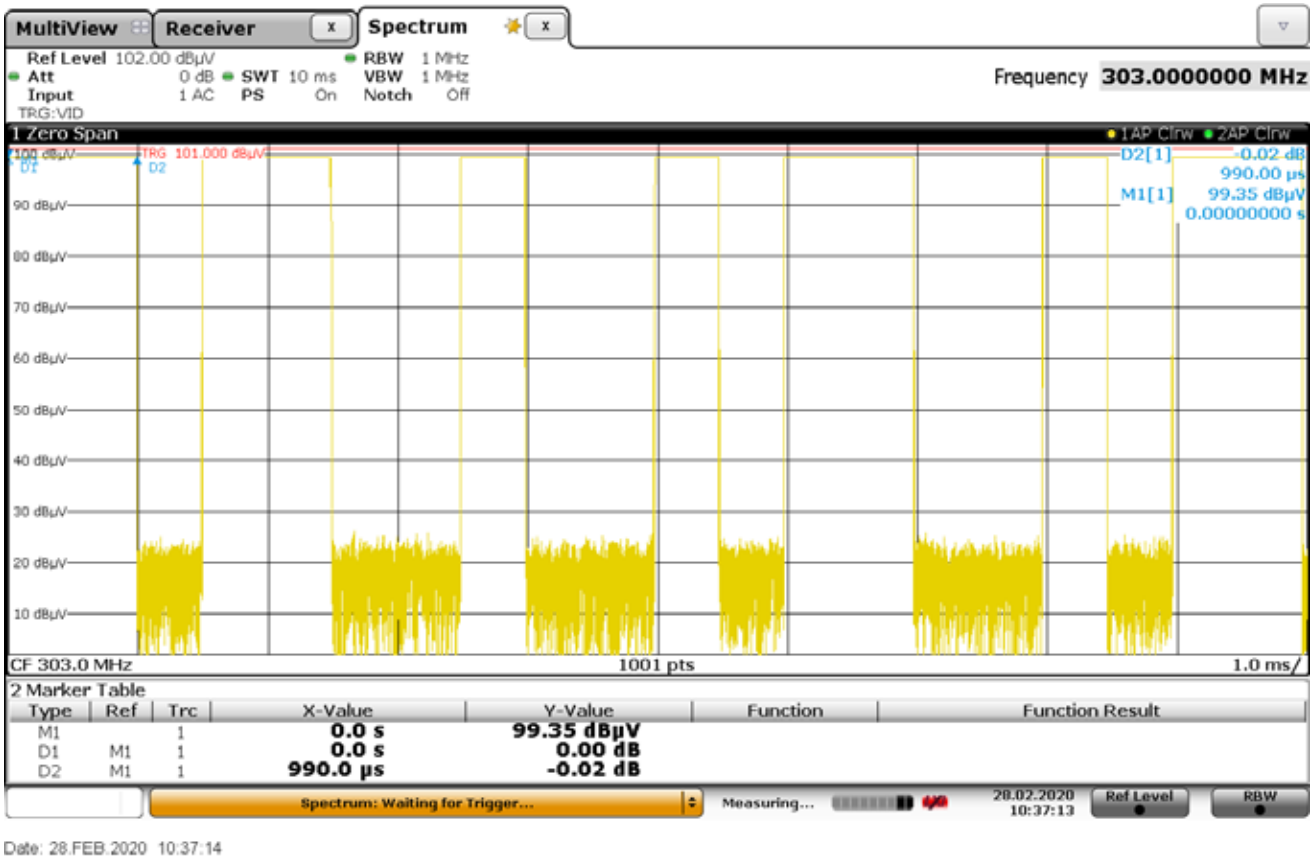
PERIODIC OPERATION



Date: 24.FEB.2020 14:22:13

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 303MHz (Guardian Fix Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 990µs = 0.99ms

DUTY CYCLE – WIDE PULSE



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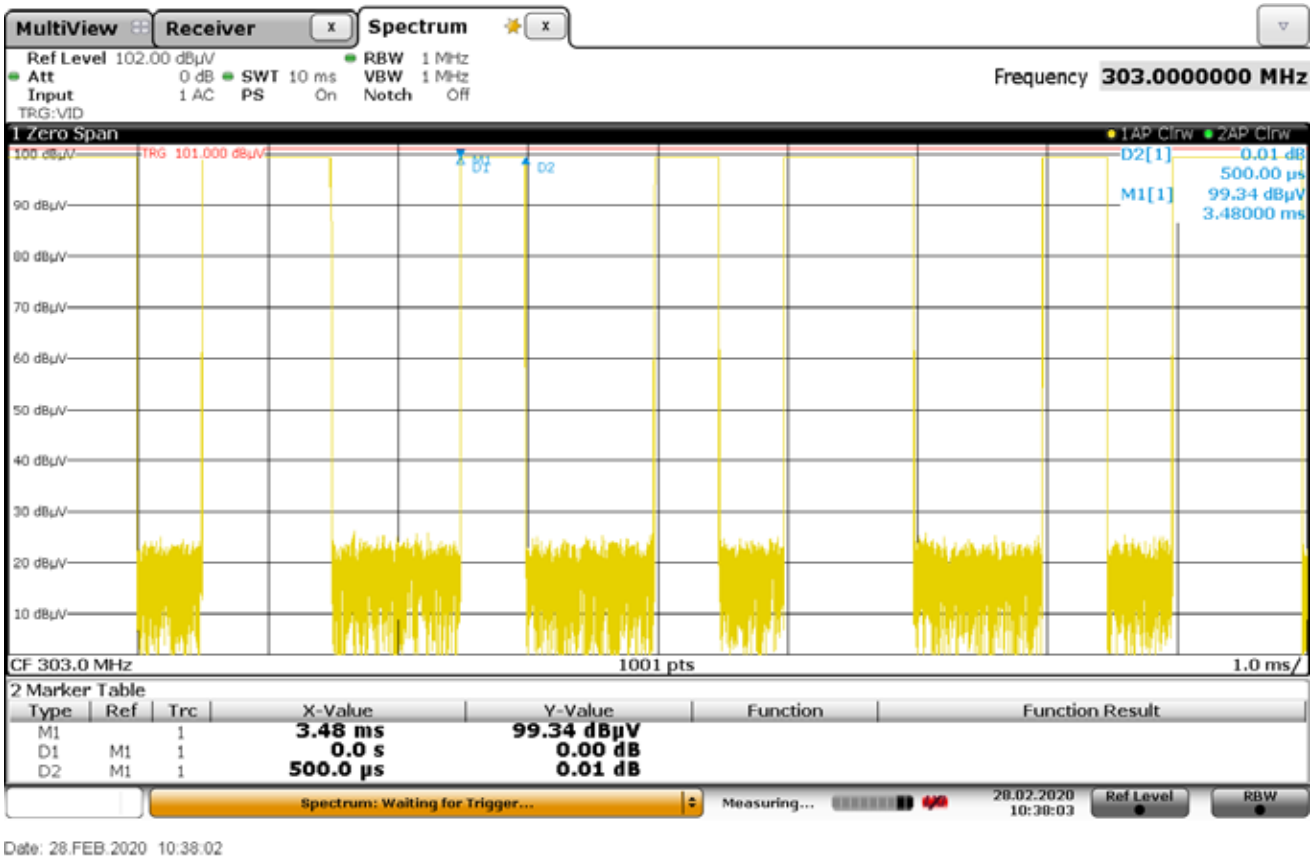
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 303MHz (Guardian Fix Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 500µs = 0.5ms

DUTY CYCLE – NARROW PULSE



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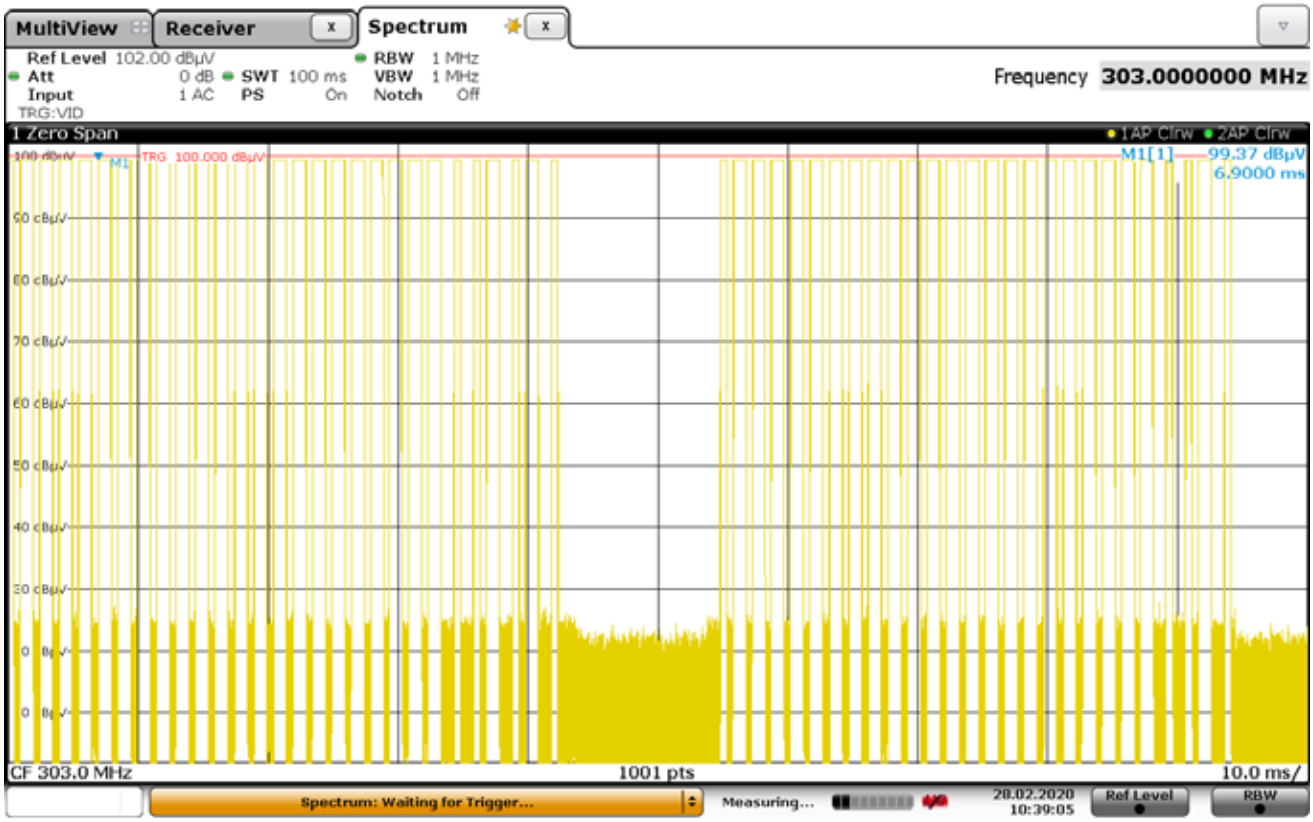
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 303MHz (Guardian Fix Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 24 × 0.99ms = 23.76ms 3 × 0.5ms = 1.5ms 23.79 + 1.5 = 25.29ms D.C = 20log(25.29/100) = **-11.94dB**

DUTY CYCLE



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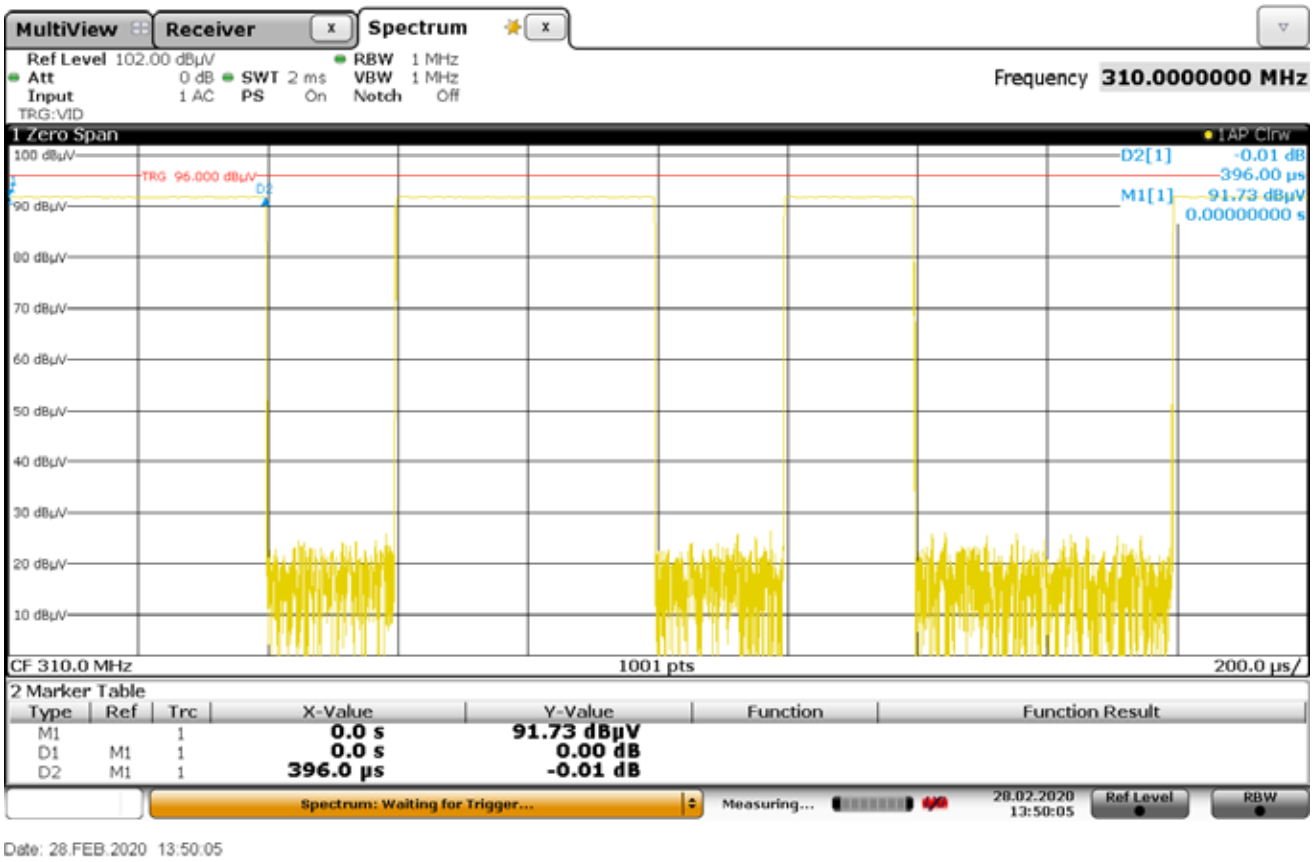
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (Secure Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 396µs = 0.396ms

DUTY CYCLE – WIDE PULSE



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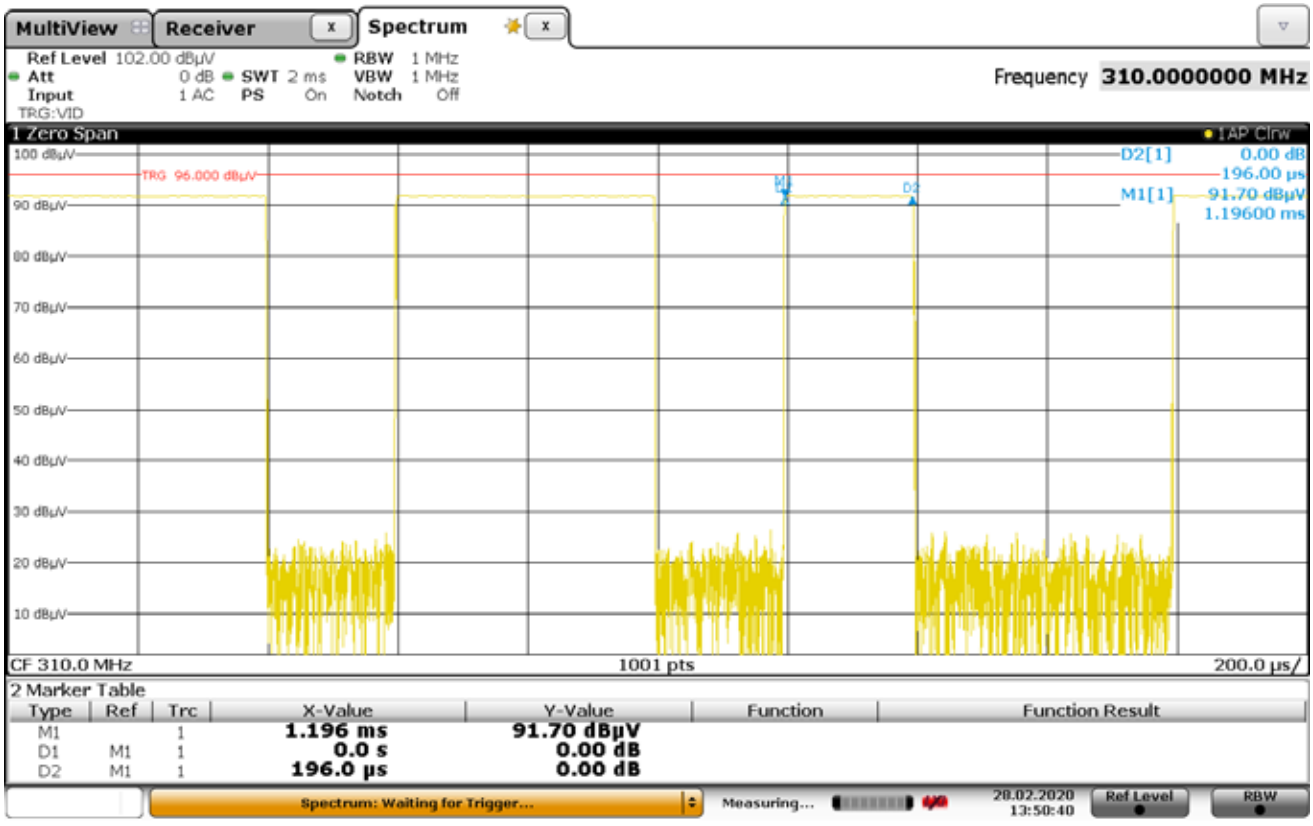
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (Secure Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 196µs = 0.196ms

DUTY CYCLE – NARROW PULSE



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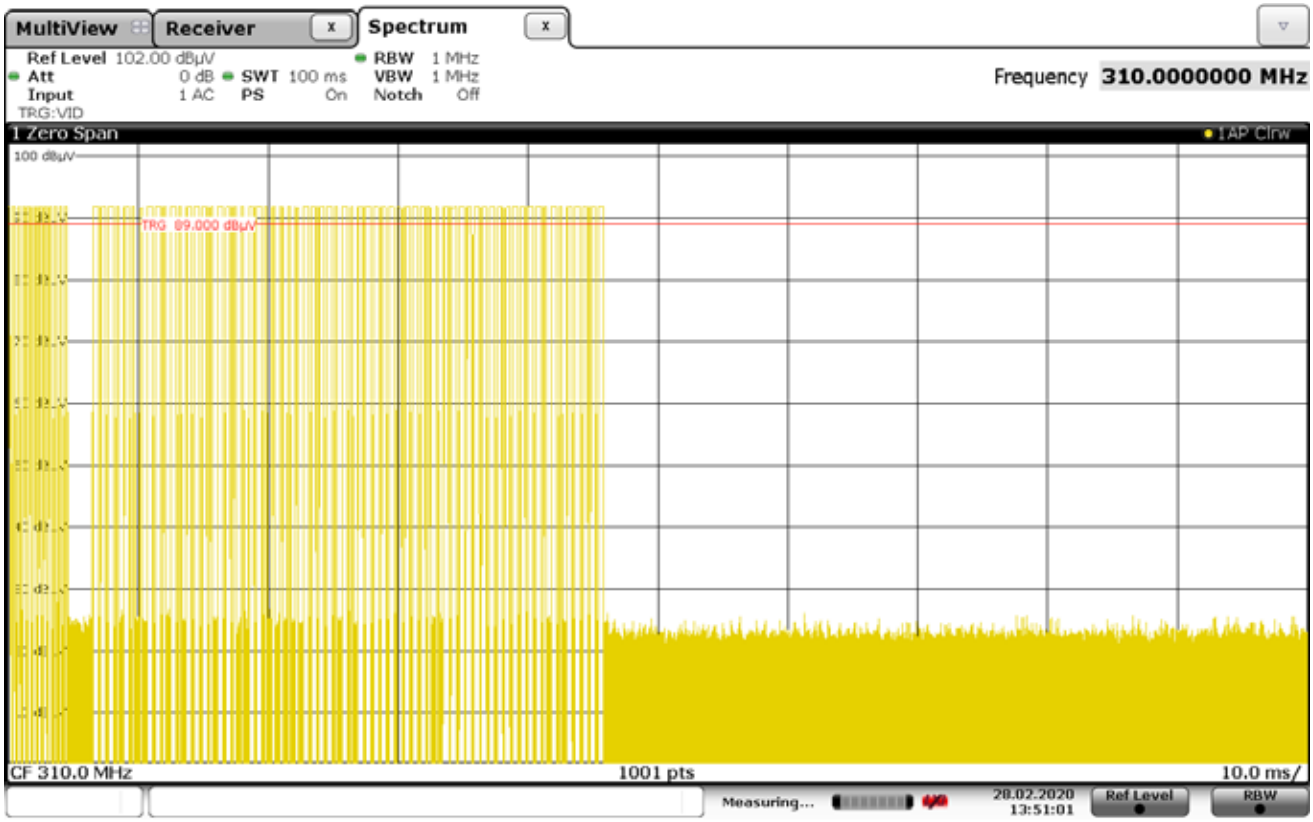
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (Secure Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 46 × 0.396ms = 18.216ms 19 × 0.196ms = 3.724ms 18.216 + 3.724 = 21.94ms D.C = 20log(21.94/100) = **-13.17dB**

DUTY CYCLE



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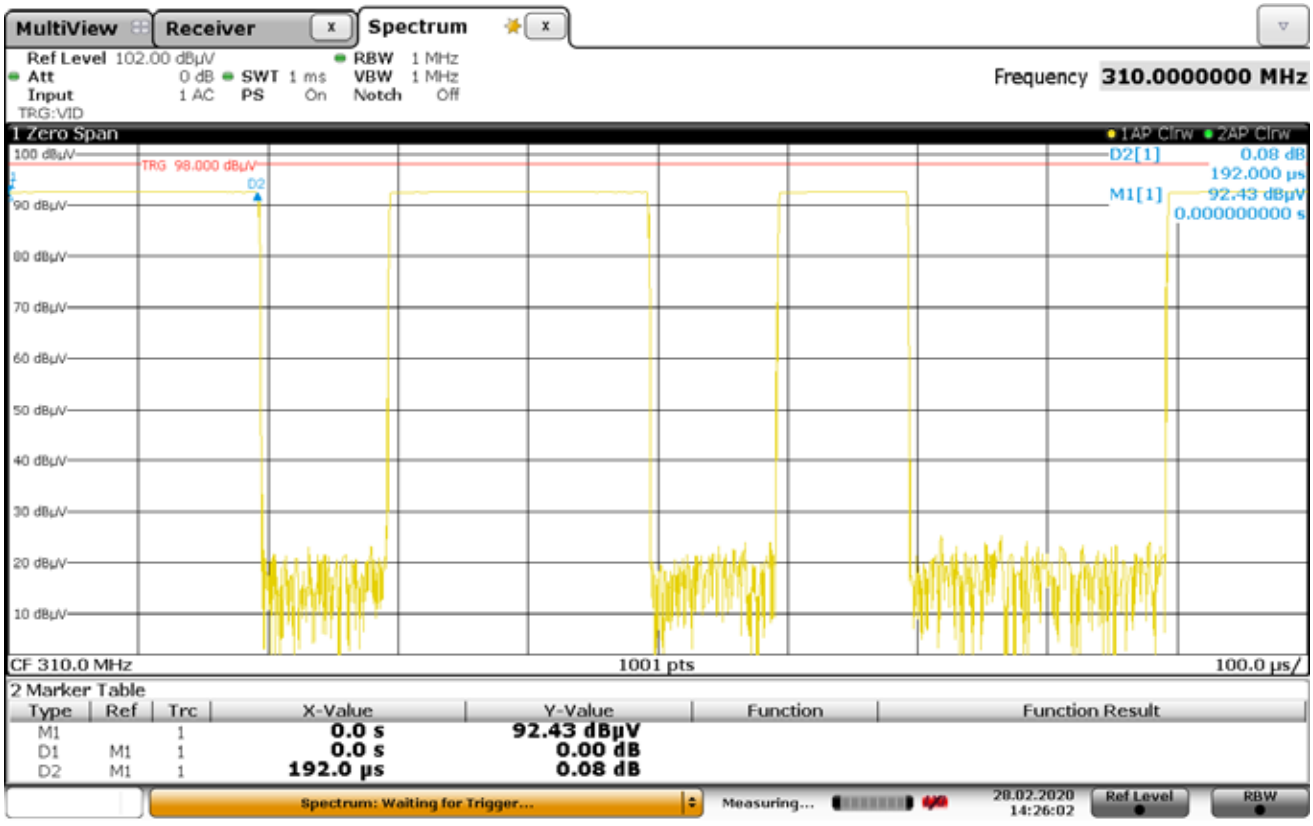
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (Rolling Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 192µs = 0.192ms

DUTY CYCLE – WIDE PULSE



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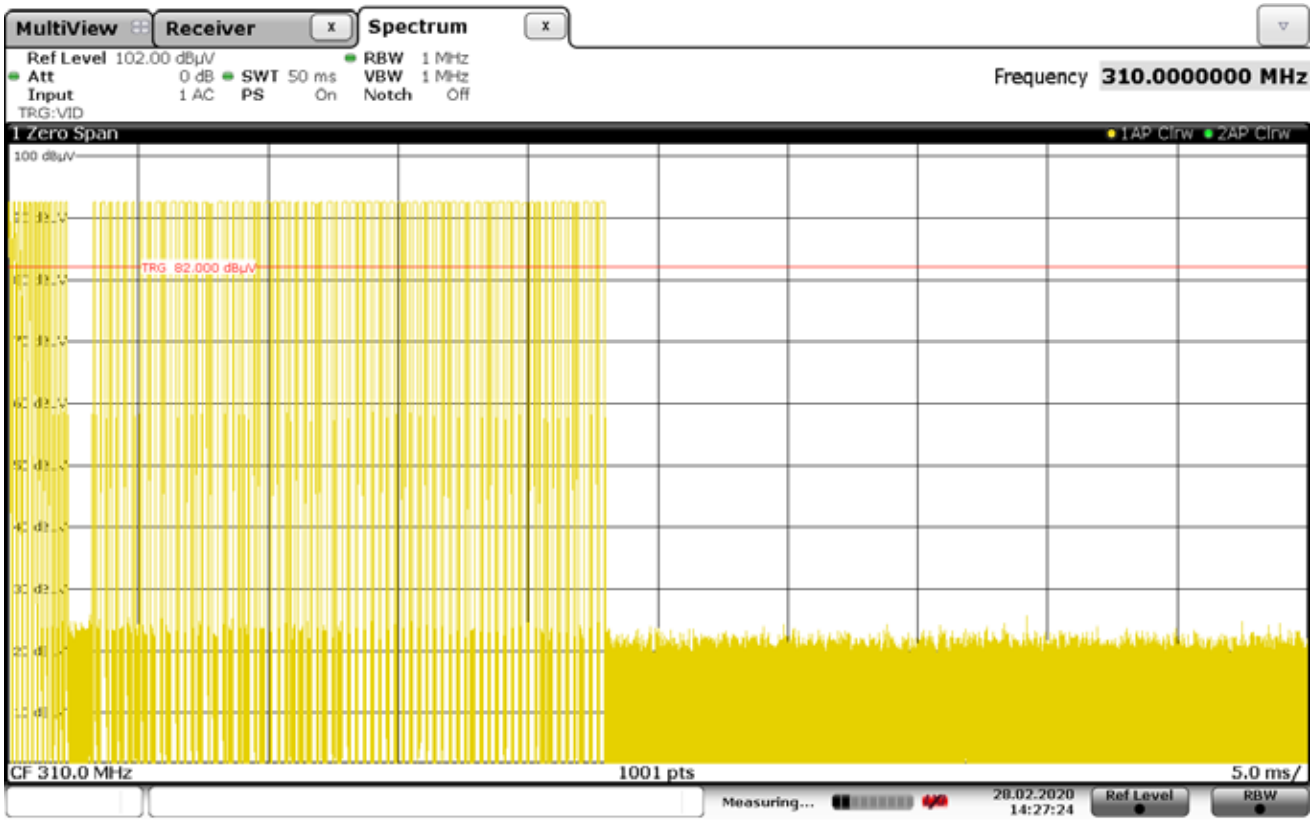
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (Rolling Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 97µs = 0.097ms

DUTY CYCLE – NARROW PULSE

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (Rolling Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 43 × 0.192ms = 8.256ms 21 × 0.097ms = 2.037ms 8.256 + 2.037 = 10.293ms D.C = 20log(21.94/100) = **-19.75dB**

DUTY CYCLE



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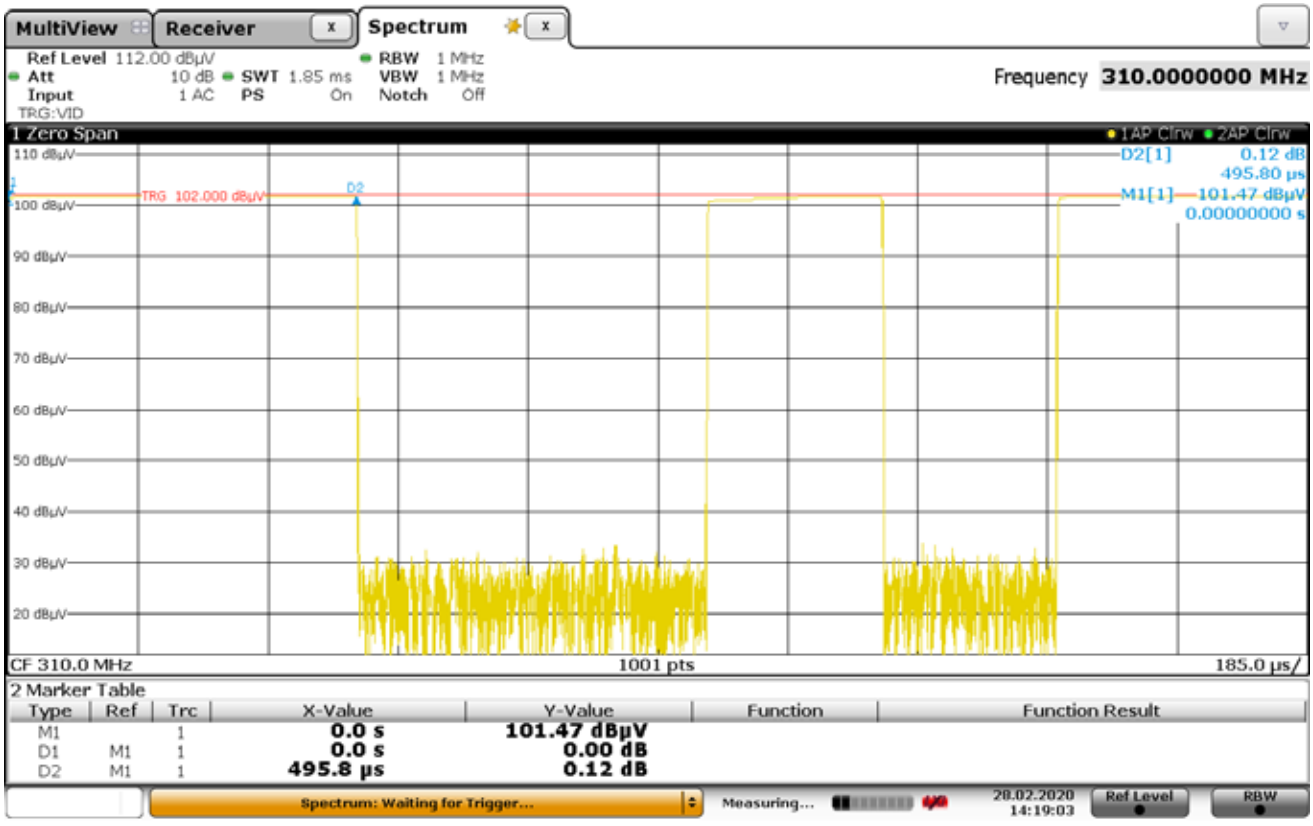
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 495.8µs = 0.4958ms

DUTY CYCLE – WIDE PULSE



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DATA PAGE	
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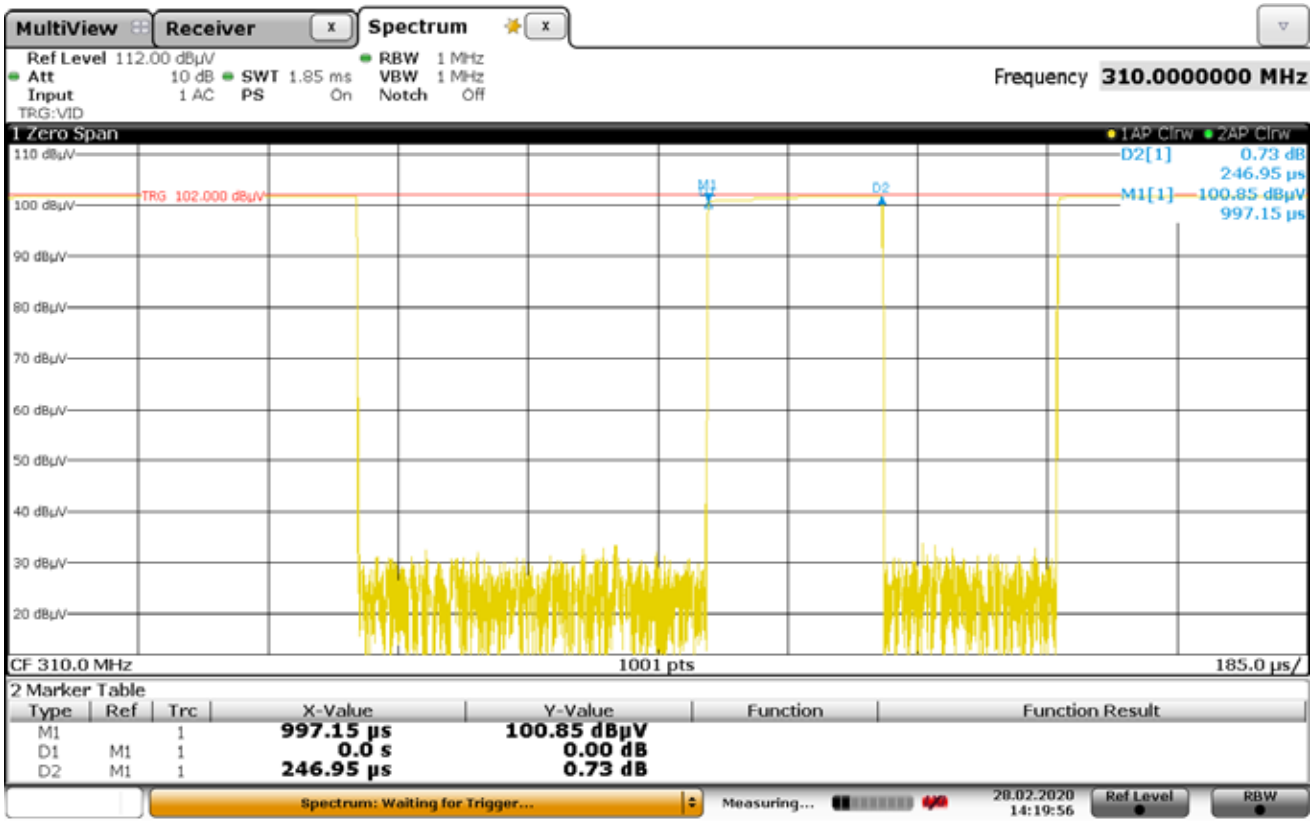
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 246.95µs = 0.24695ms

DUTY CYCLE – NARROW PULSE



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DATA PAGE	
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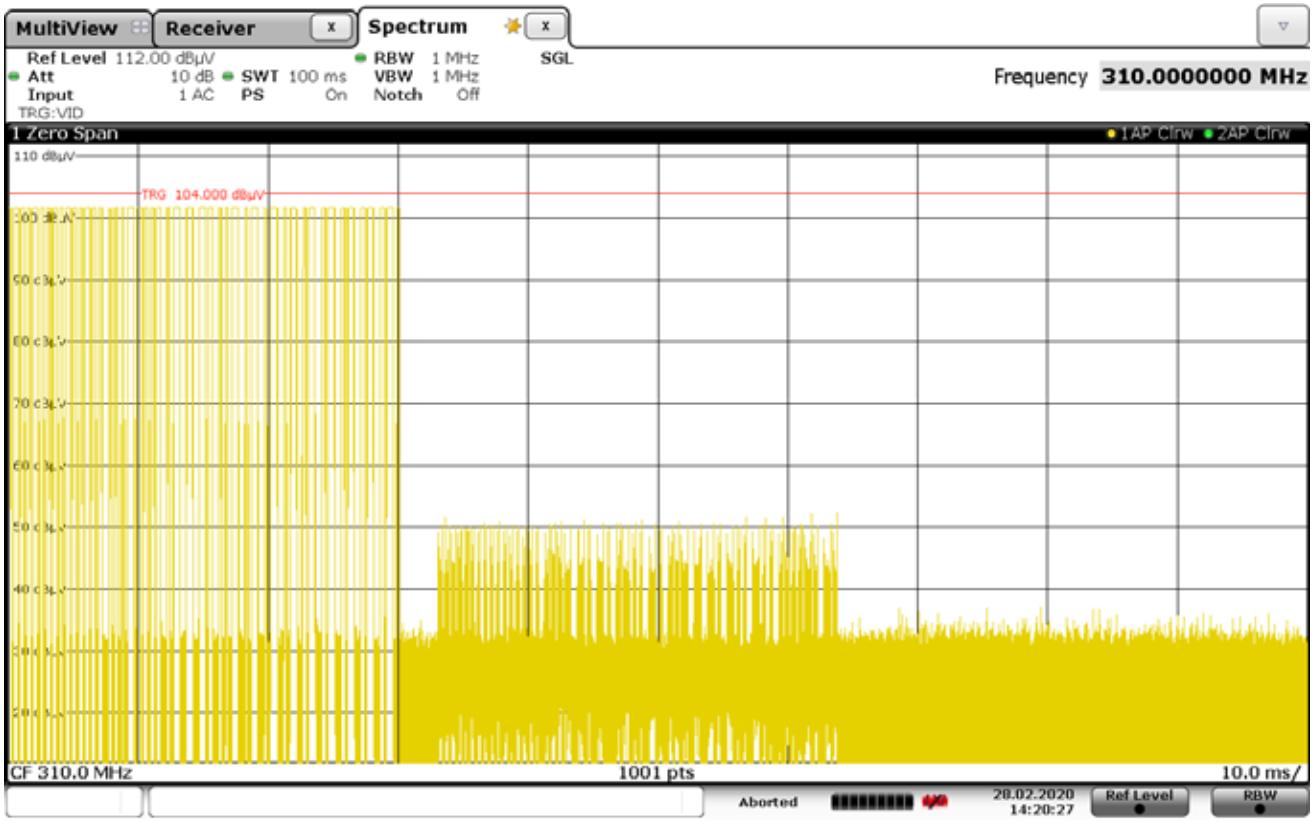
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 310MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 20 × 0.4958ms = 9.916ms 21 × 0.24695ms = 5.18595ms 9.916 + 5.18595 = 15.10195ms D.C = 20log(15.10195/100) = **-16.41dB**

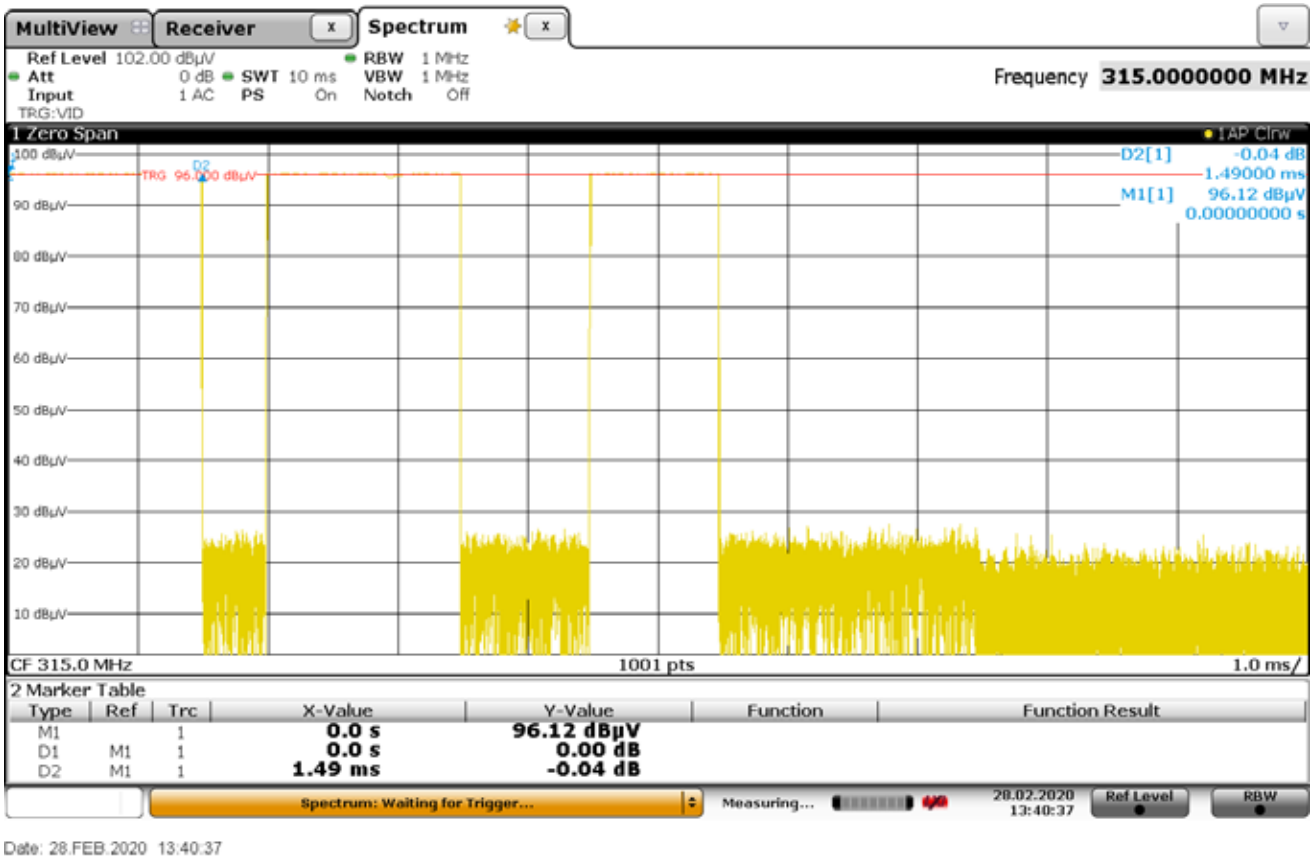
DUTY CYCLE



Date: 28.FEB.2020 14:20:27

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (D Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 1.49ms

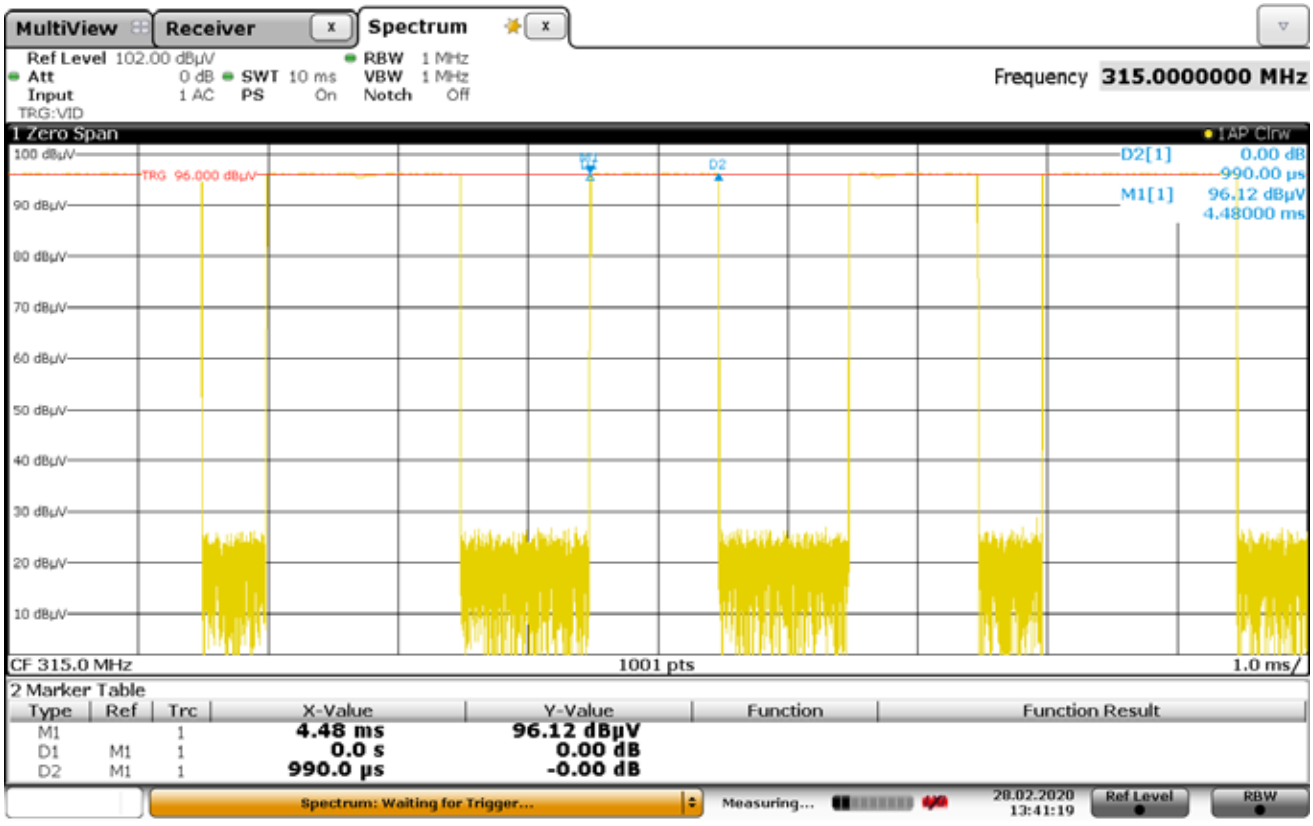
DUTY CYCLE – WIDE PULSE



Date: 28.FEB.2020 13:40:37

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (D Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 990µs = 0.99ms

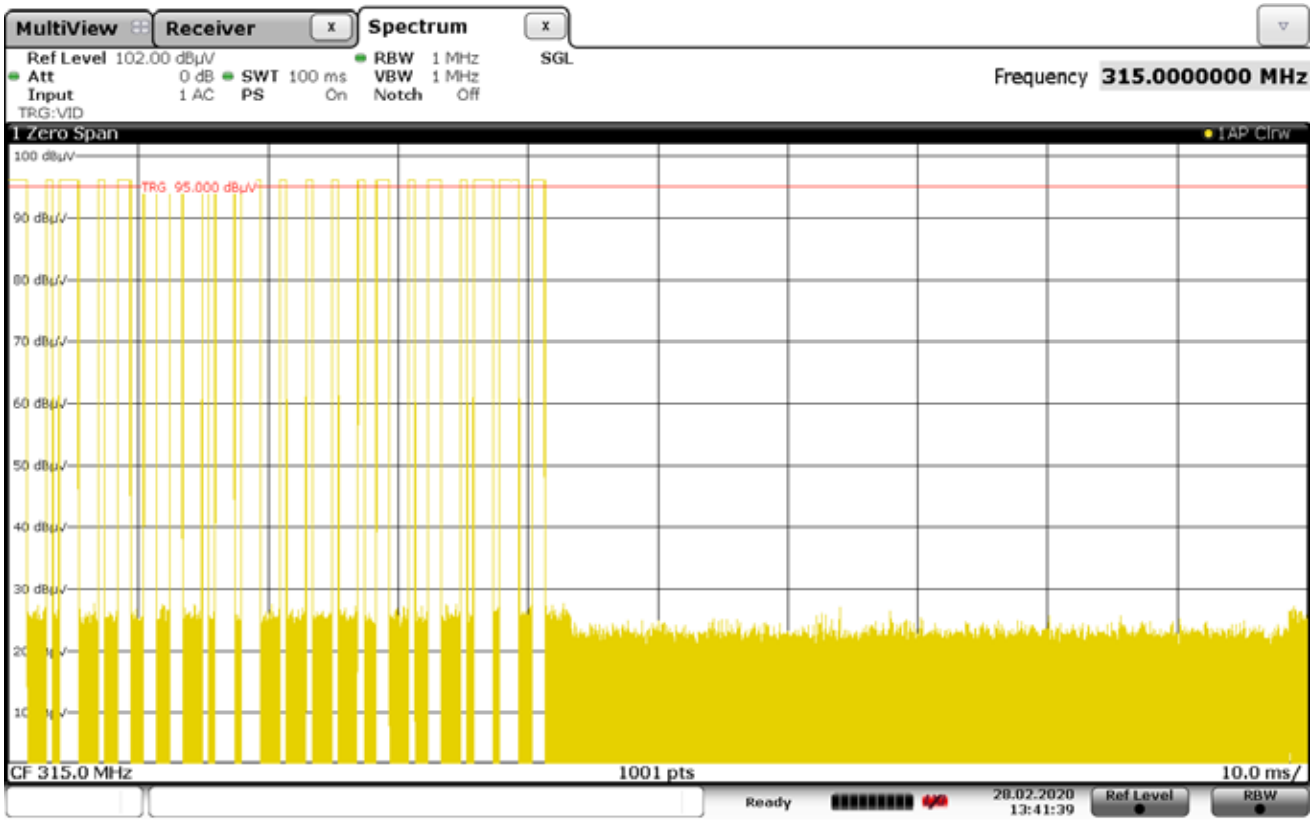
DUTY CYCLE – NARROW PULSE



Date: 28.FEB.2020 13:41:19

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (D Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 12 × 1.49ms = 17.88ms 9 × 0.99ms = 8.91ms 17.88 + 8.91 = 26.79ms D.C = 20log(26.79/100) = **-11.44dB**

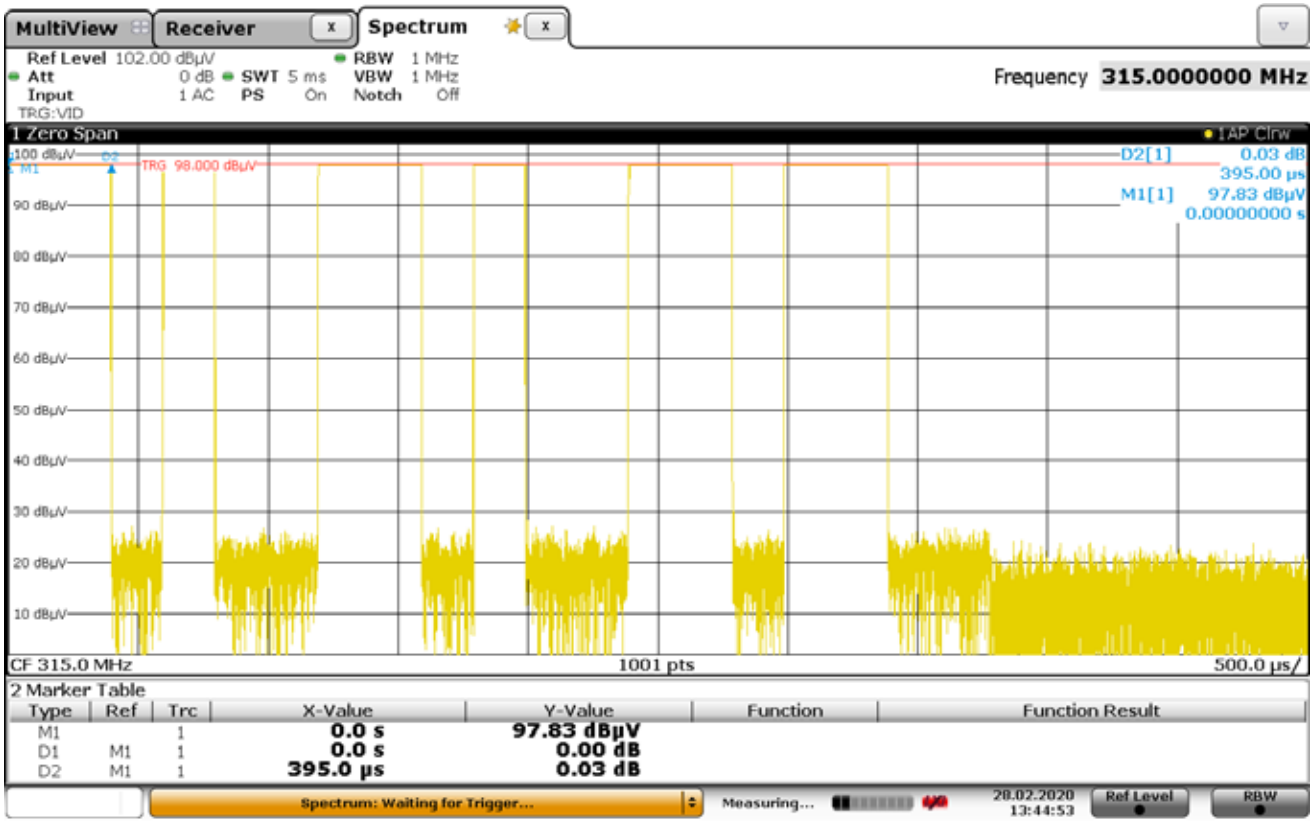
DUTY CYCLE



Date: 28.FEB.2020 13:41:39

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (IntelliCode)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 395µs = 0.395ms

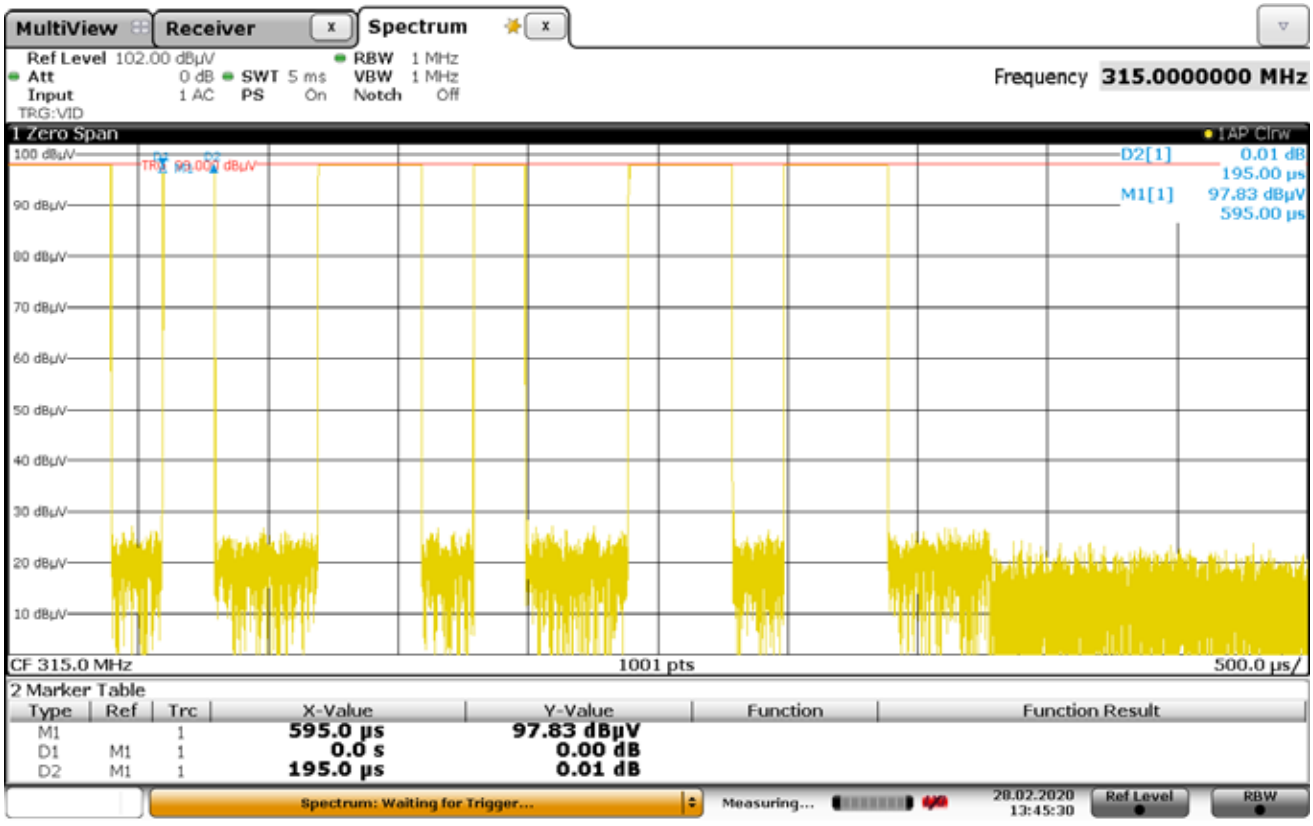
DUTY CYCLE – WIDE PULSE



Date: 28.FEB.2020 13:44:53

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (IntelliCode)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 195µs = 0.195ms

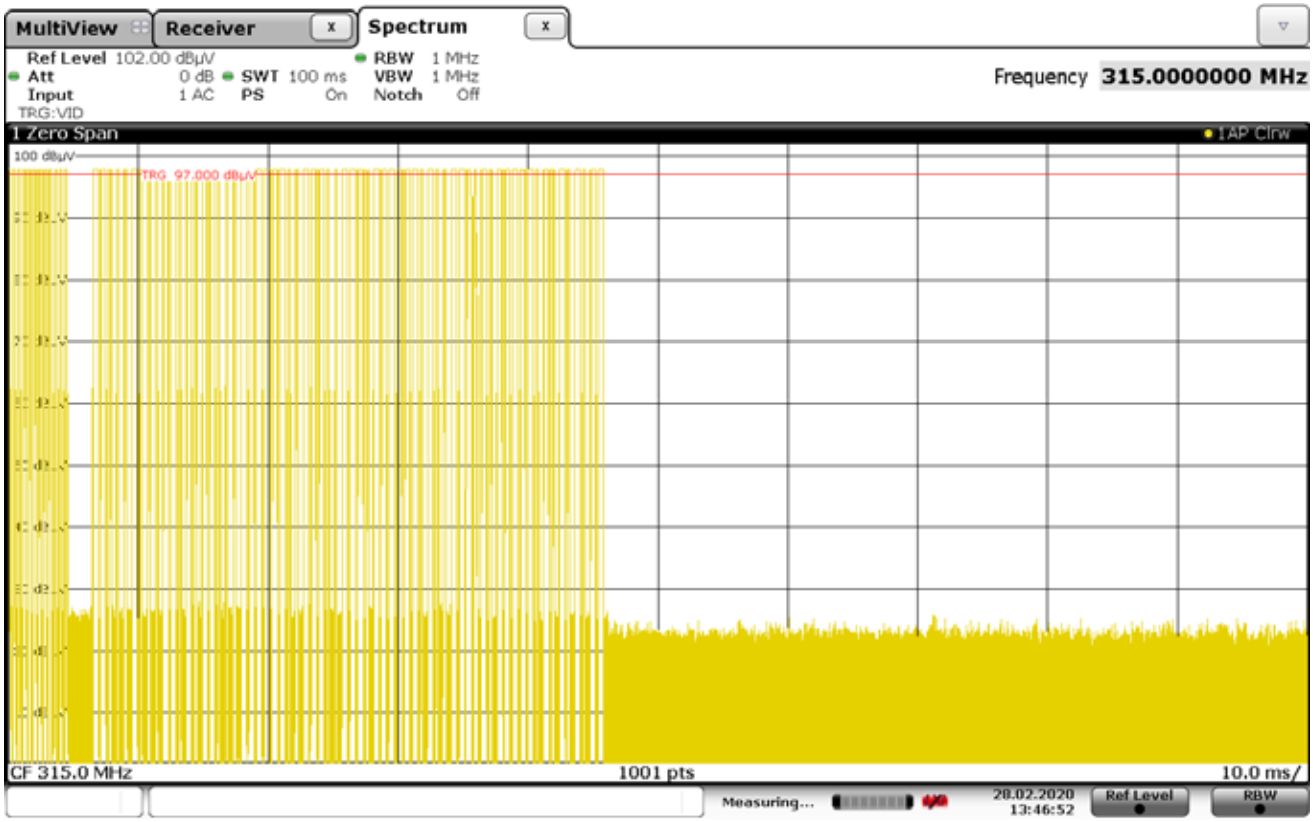
DUTY CYCLE – NARROW PULSE



Date: 28.FEB.2020 13:45:30

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (IntelliCode)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 42 × 0.395ms = 16.59ms 21 × 0.195ms = 4.095ms 16.59 + 4.095 = 20.685ms D.C = 20log(20.685/100) = **-13.68dB**

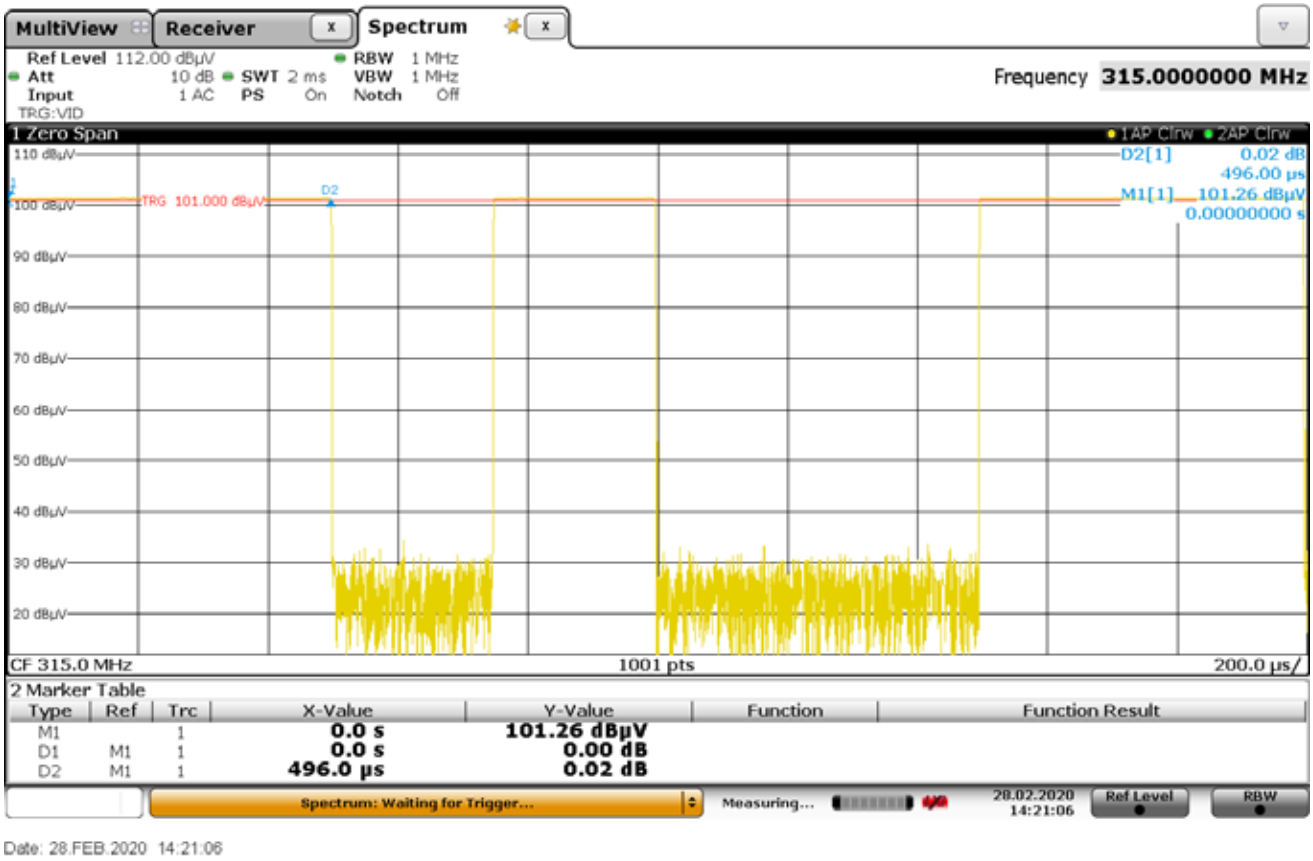
DUTY CYCLE



Date: 28.FEB.2020 13:46:52

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 496µs = 0.496ms

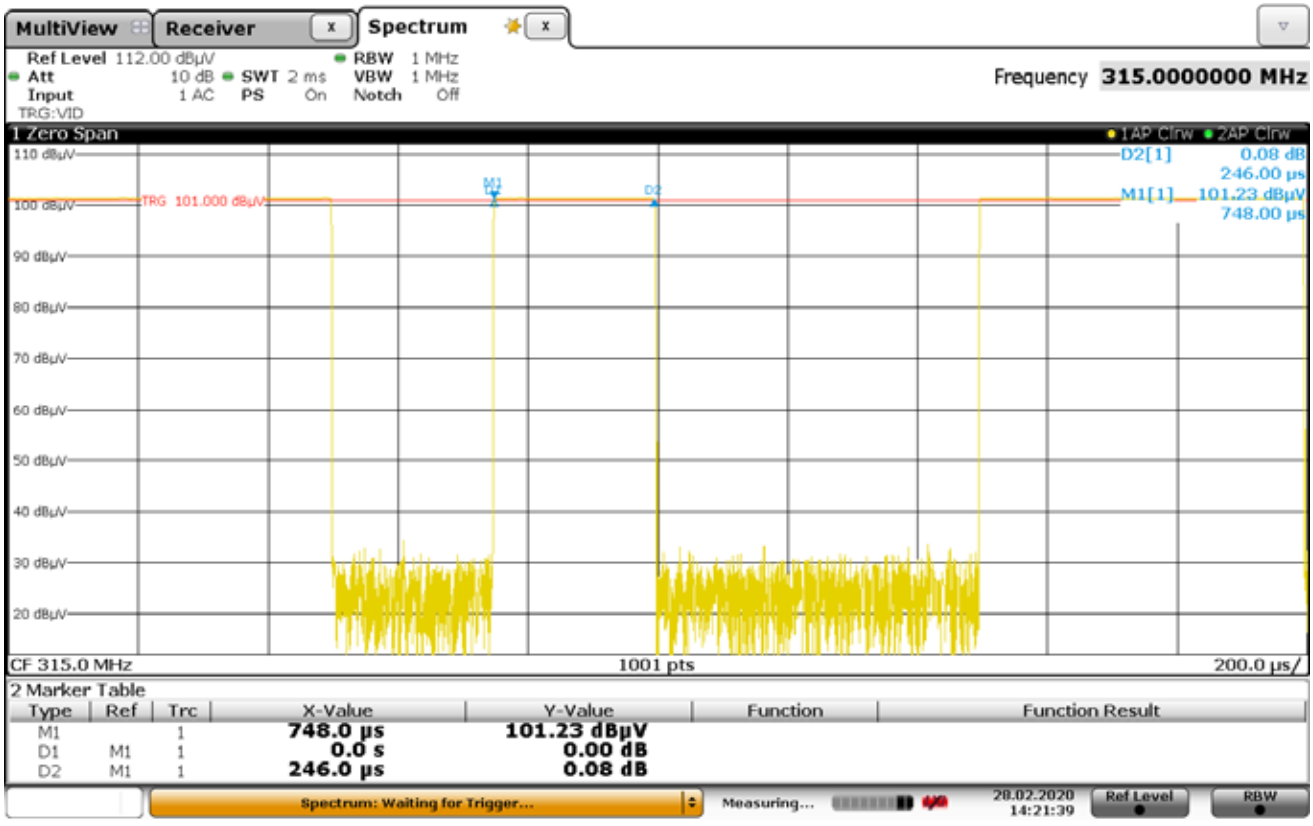
DUTY CYCLE – WIDE PULSE



Date: 28.FEB.2020 14:21:06

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 246µs = 0.246ms

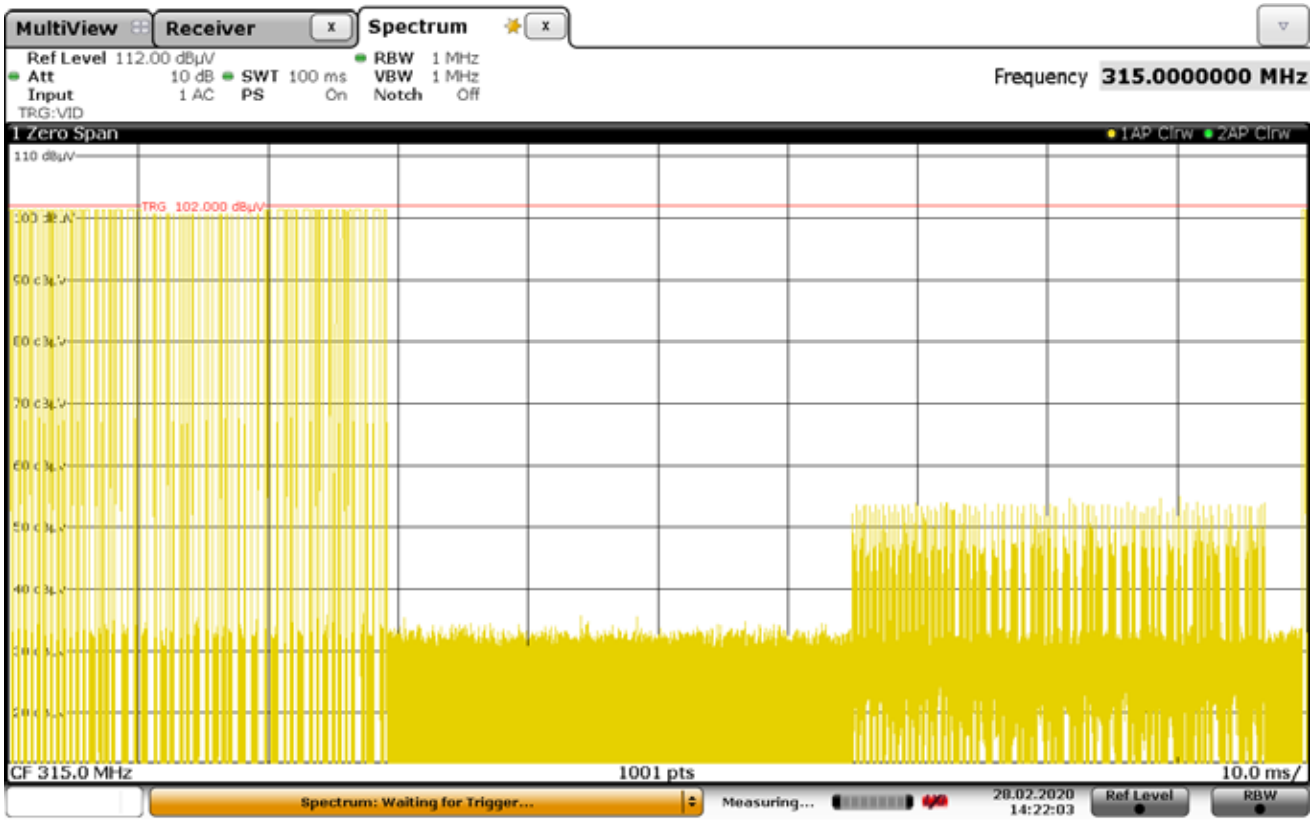
DUTY CYCLE – NARROW PULSE



Date: 28.FEB.2020 14:21:39

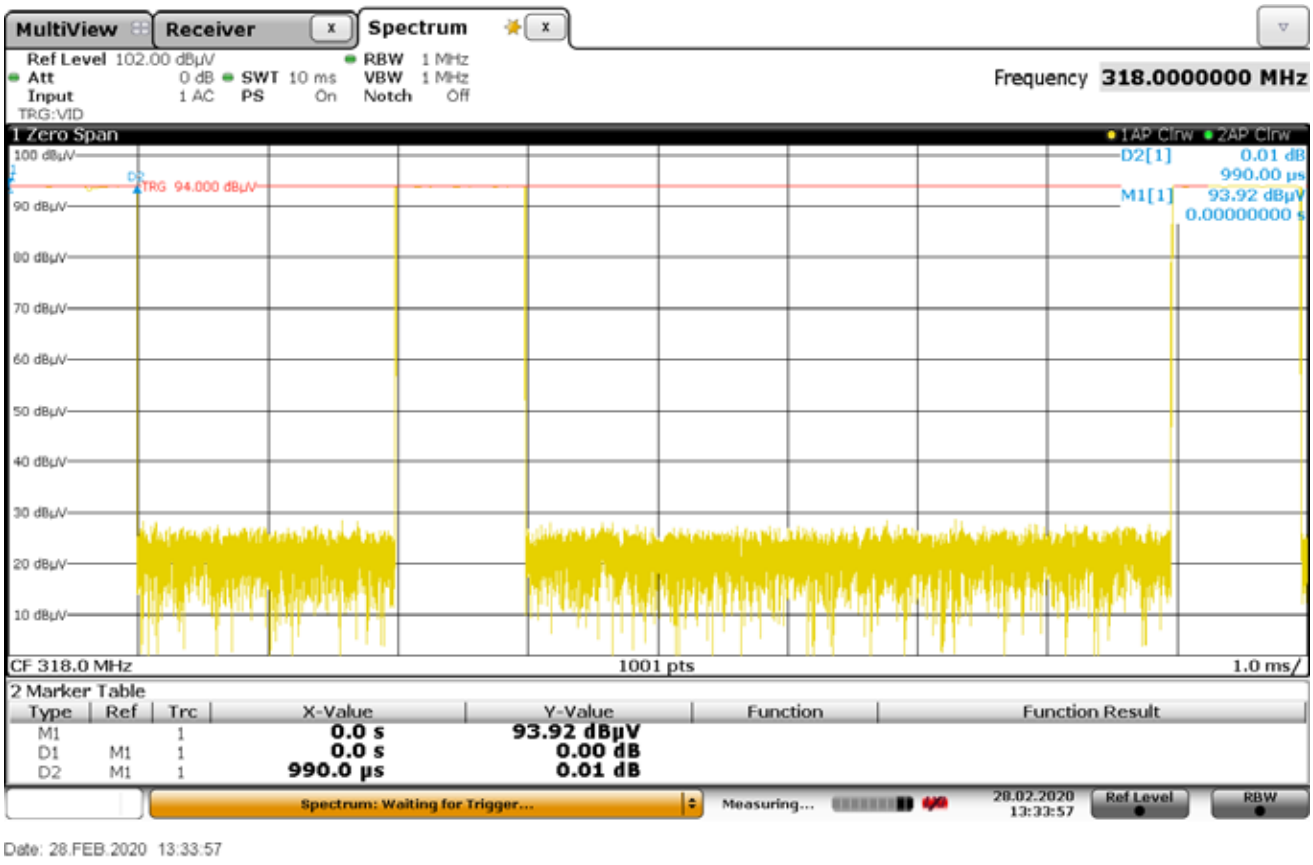
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 315MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 18 × 0.496ms = 8.928ms 31 × 0.246ms = 7.626ms 8.928 + 7.626 = 16.554ms D.C = 20log(16.554/100) = **-15.62dB**

DUTY CYCLE



DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 318MHz (Mega Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 990µs = 0.99ms

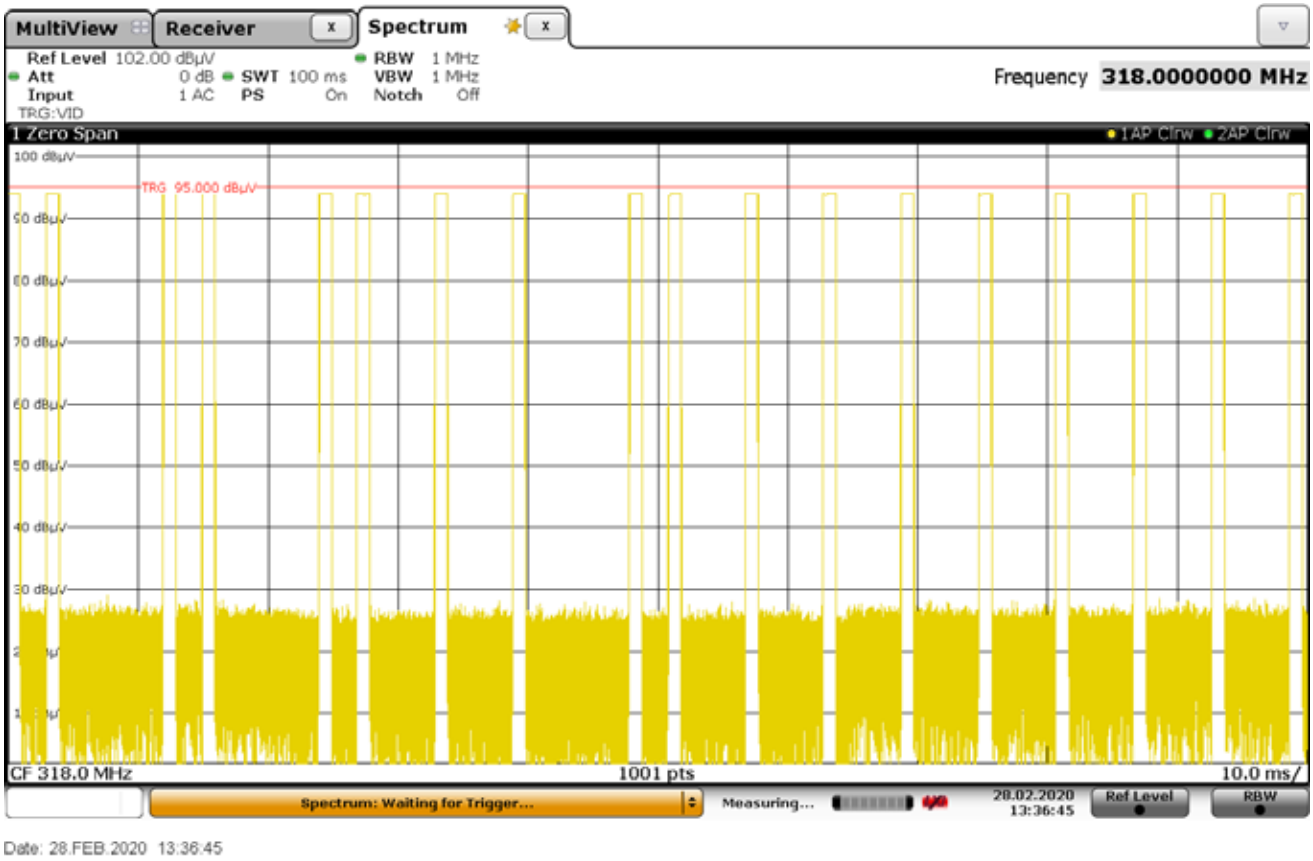
DUTY CYCLE – PULSE



Date: 28.FEB.2020 13:33:57

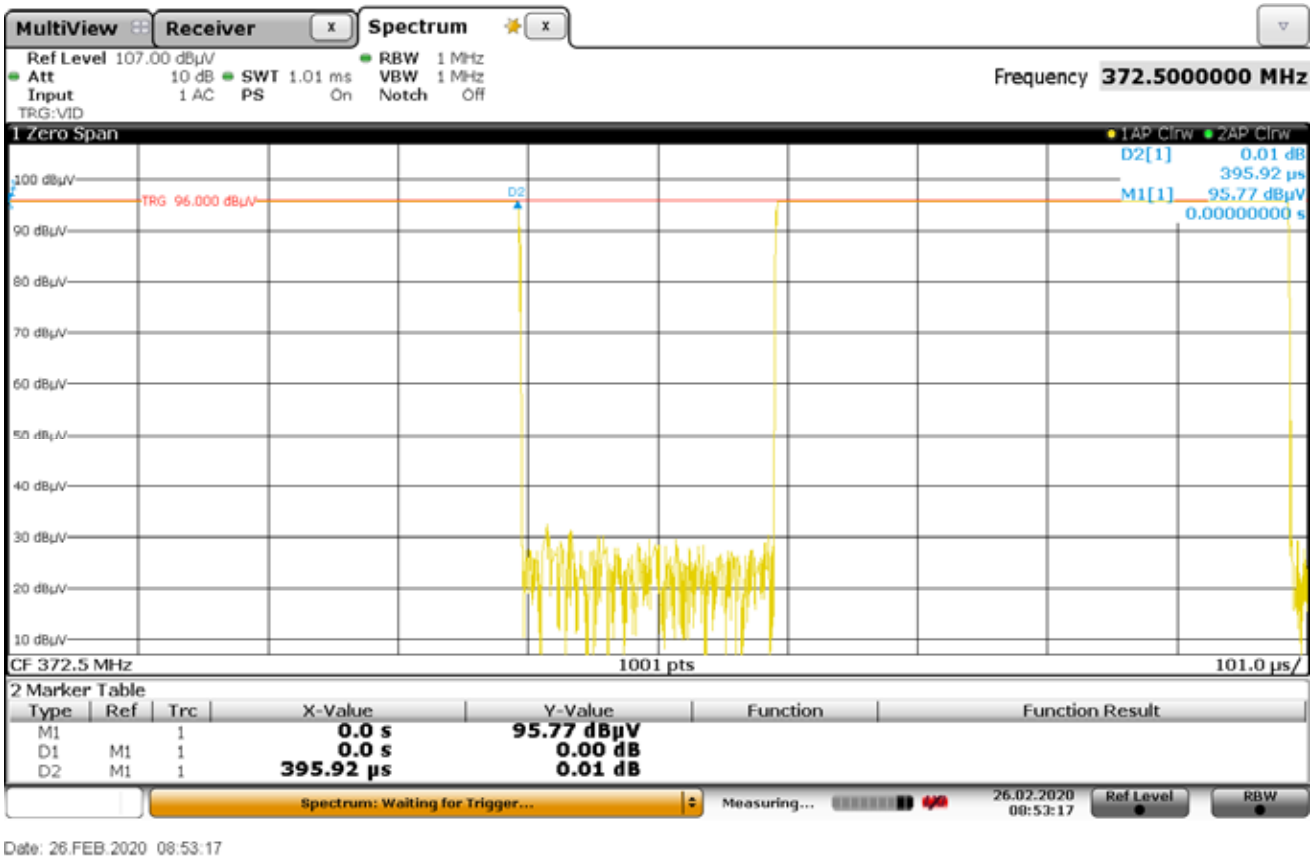
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 318MHz (Mega Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 18 × 0.99ms = 17.82ms D.C = 20log(17.82/100) = **-14.98dB**

DUTY CYCLE



DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 372.5MHz (Rolling Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 395.92µs = 0.395ms

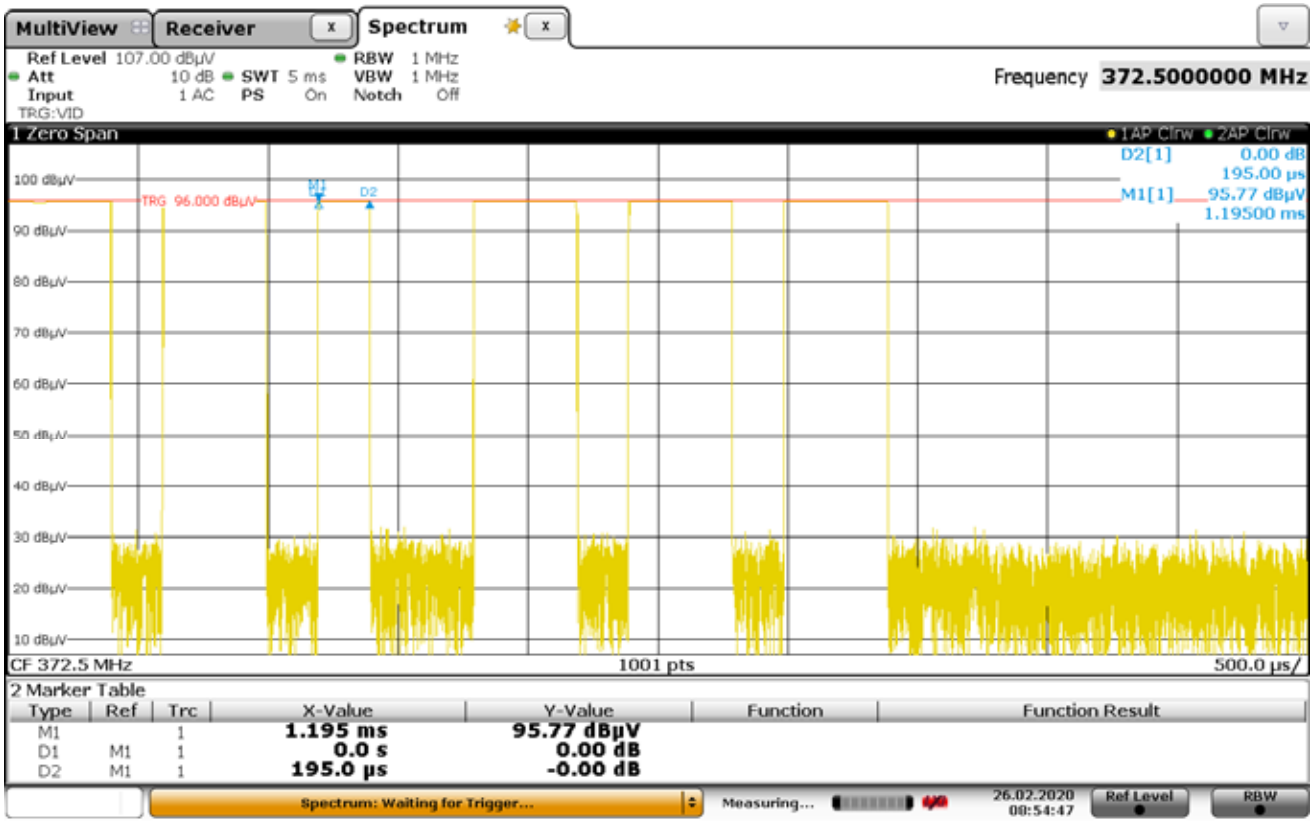
DUTY CYCLE – WIDE PULSE



Date: 26.FEB.2020 08:53:17

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 372.5MHz (Rolling Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 195µs = 0.195ms

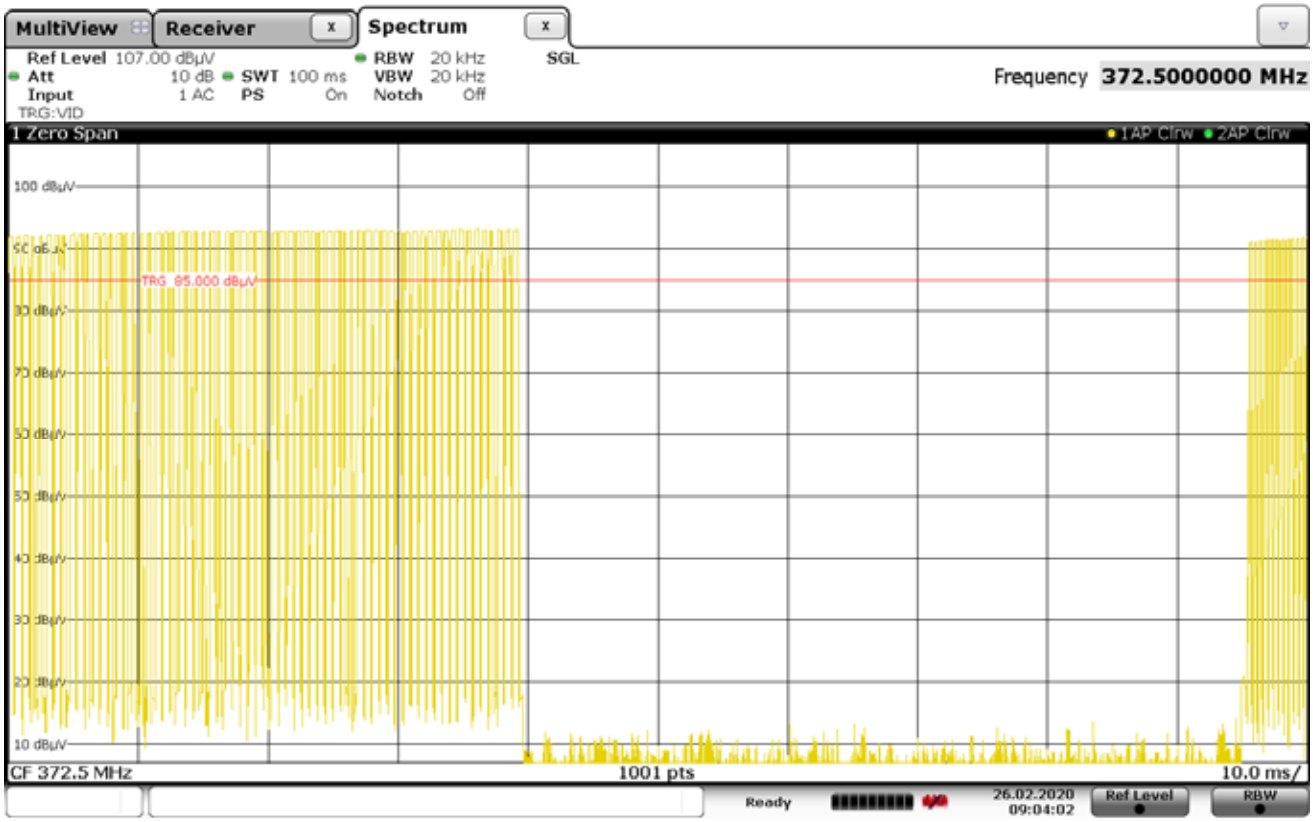
DUTY CYCLE – NARROW PULSE



Date: 26.FEB.2020 08:54:47

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 372.5MHz (Rolling Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 47 × 0.395ms = 18.565ms 16 × 0.195ms = 3.12ms 18.565 + 3.12 = 21.685ms D.C = 20log(21.685/100) = **-13.27dB**

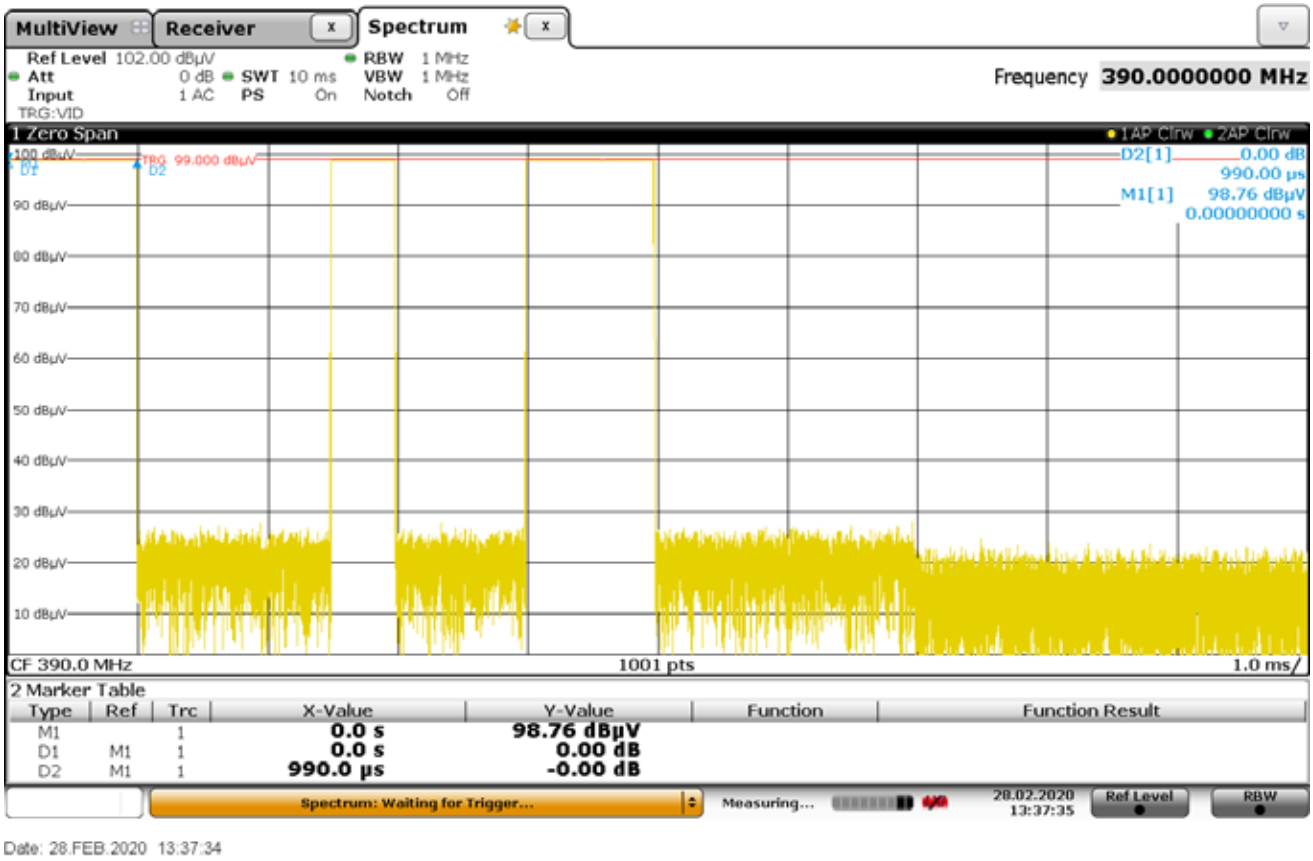
DUTY CYCLE



Date: 26.FEB.2020 09:04:02

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (D Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 990µs = 0.99ms

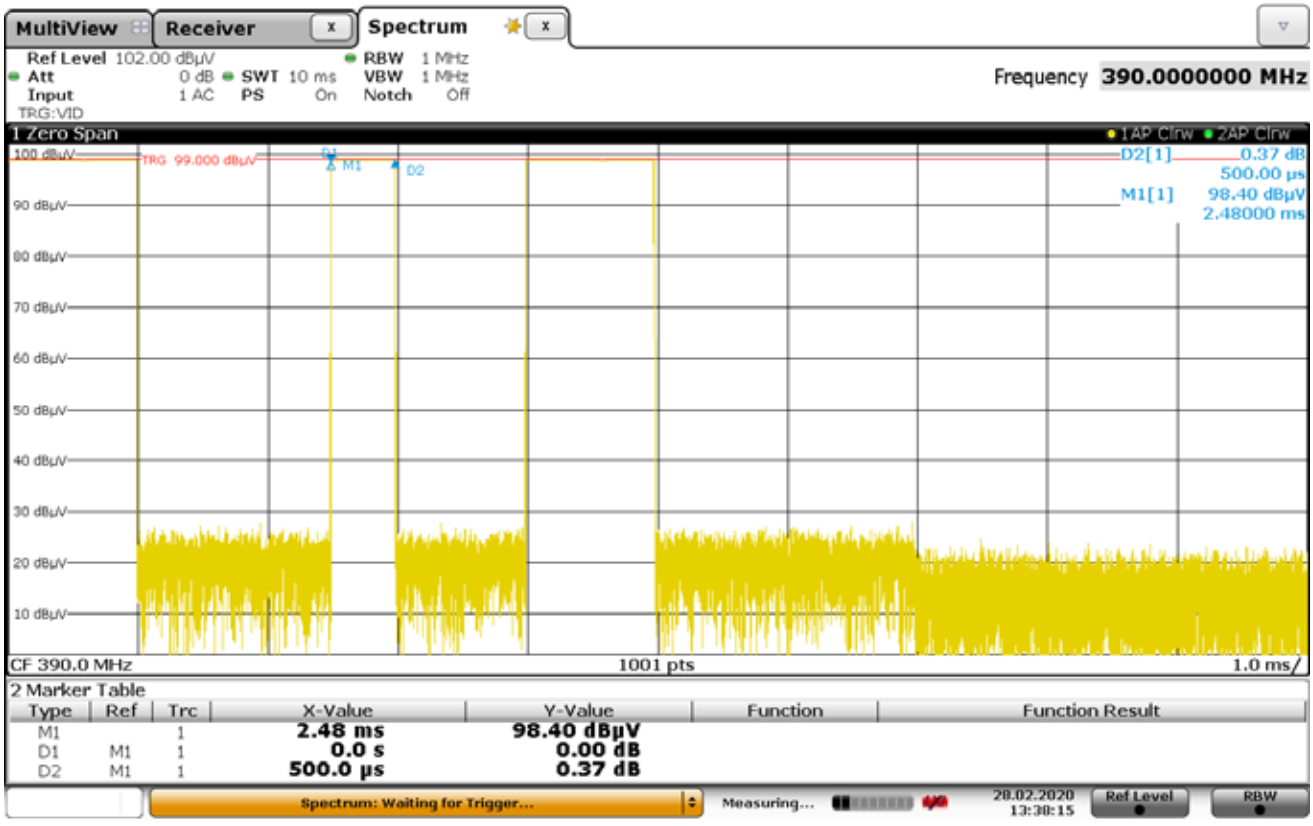
DUTY CYCLE – WIDE PULSE



Date: 28.FEB.2020 13:37:34

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (D Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 500µs = 0.5ms

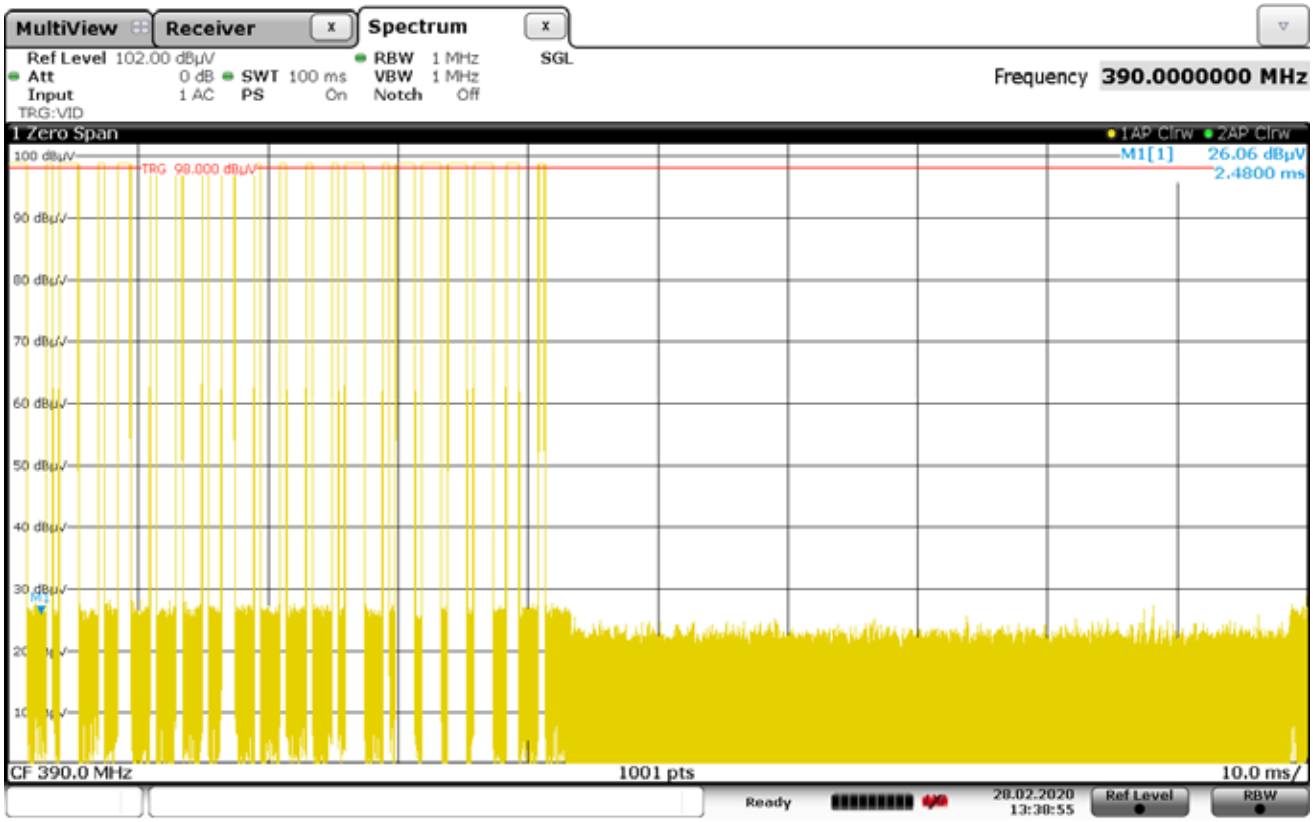
DUTY CYCLE – NARROW PULSE



Date: 28.FEB.2020 13:38:15

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (D Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 12 × 0.99ms = 11.88ms 11 × 0.5ms = 5.5ms 11.88 + 5.5 = 17.38ms D.C = 20log(17.38/100) = **-15.19dB**

DUTY CYCLE



Date: 28.FEB.2020 13:38:55

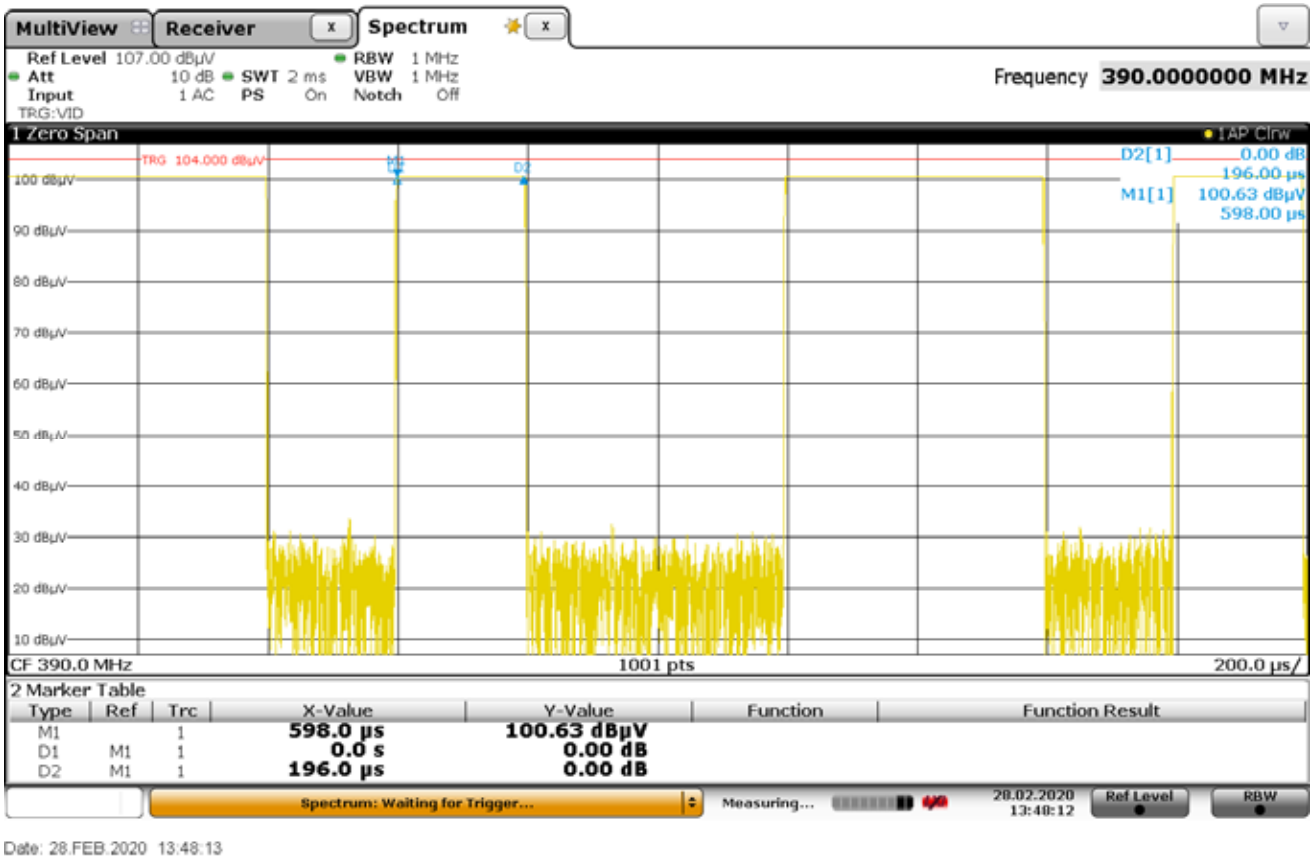
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (IntelliCode)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 396µs = 0.396ms

DUTY CYCLE – WIDE PULSE

Date: 28.FEB.2020 13:47:43

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (IntelliCode)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 196µs = 0.196ms

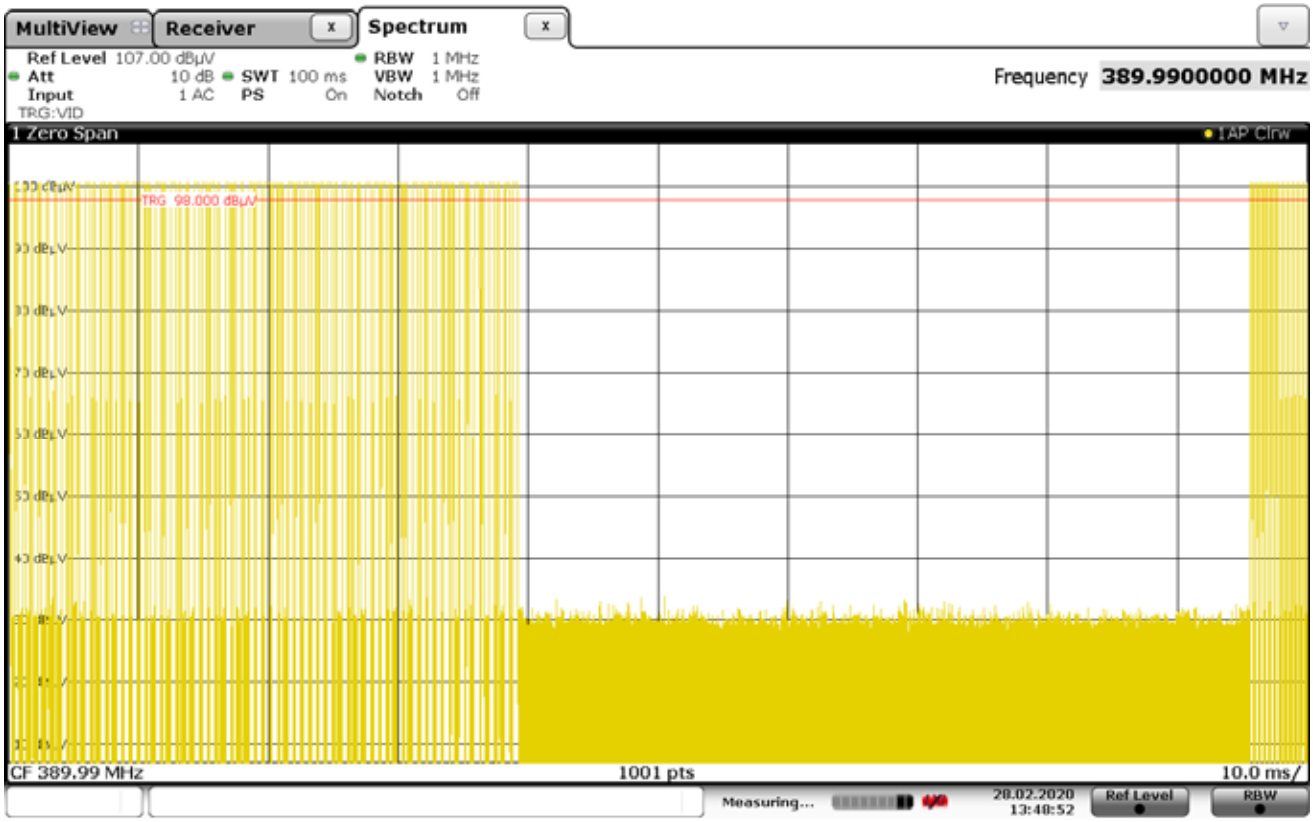
DUTY CYCLE – NARROW PULSE



Date: 28.FEB.2020 13:48:13

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (IntelliCode)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 36 × 0.396ms = 14.256ms 27 × 0.196ms = 5.292ms 14.256 + 5.292 = 19.548ms D.C = 20log(19.548/100) = **-14.17dB**

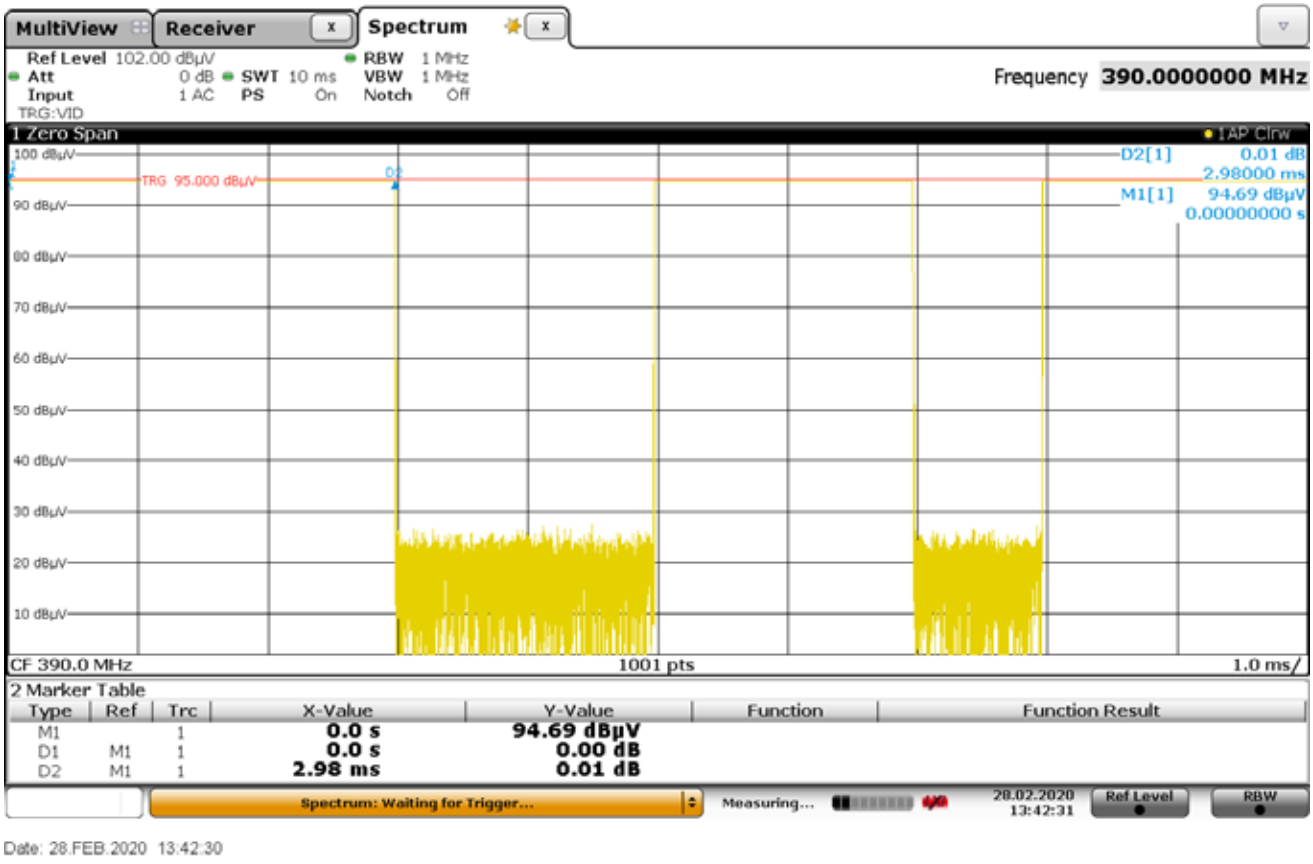
DUTY CYCLE



Date: 28.FEB.2020 13:48:52

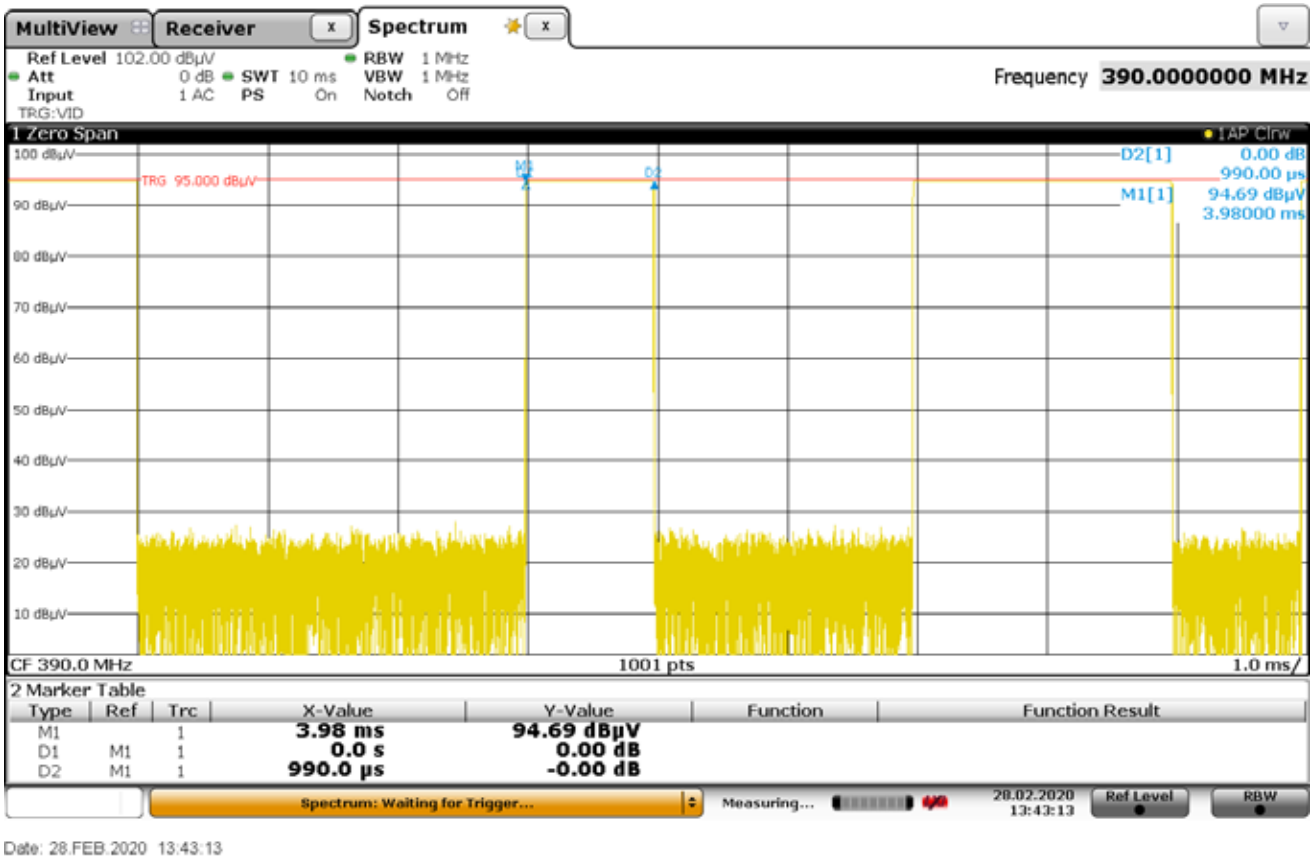
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (A Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 2.98ms

DUTY CYCLE – WIDE PULSE



DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (A Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 990µs = 0.99ms

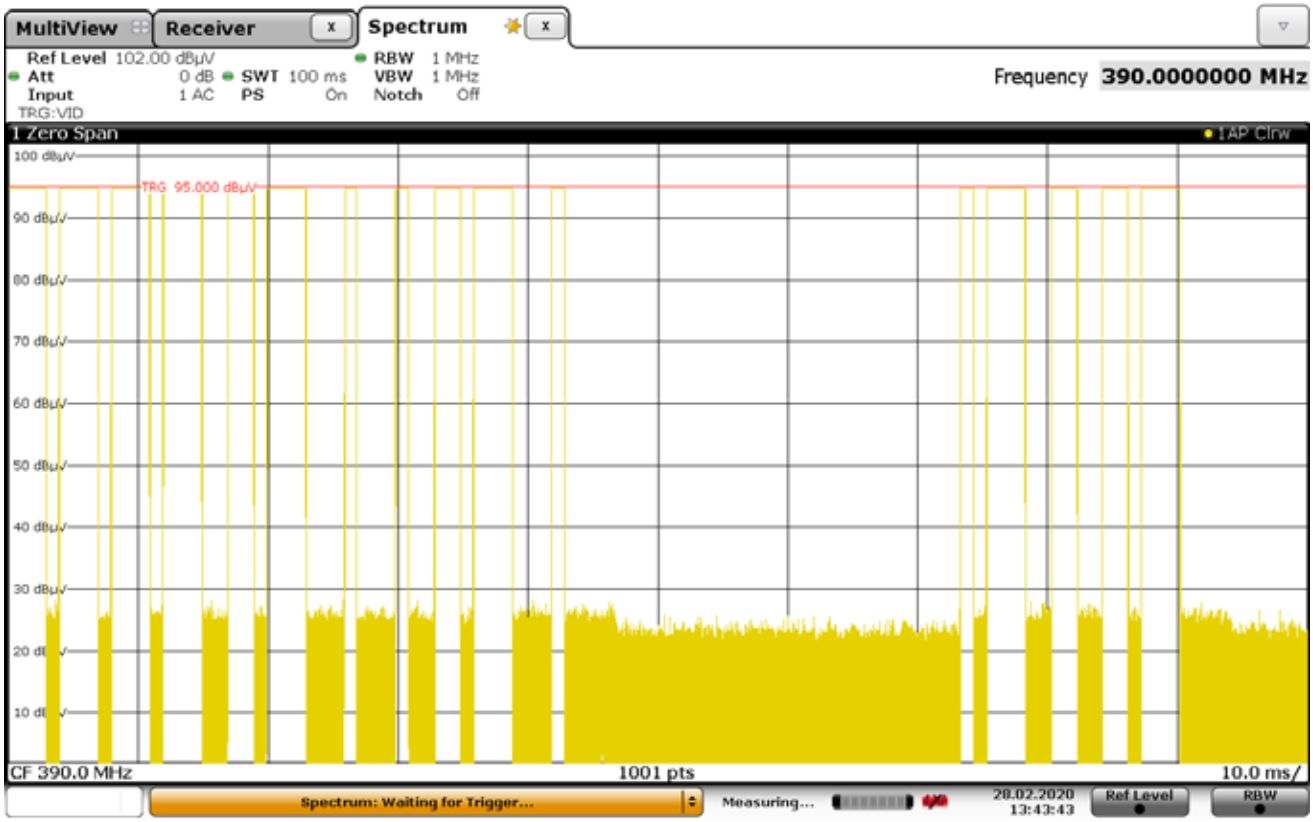
DUTY CYCLE – NARROW PULSE



Date: 28.FEB.2020 13:43:13

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (A Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 6 × 2.98ms = 17.88ms 5 × 0.99ms = 4.95ms 17.88 + 4.95 = 22.83ms D.C = 20log(22.83/100) = **-12.82dB**

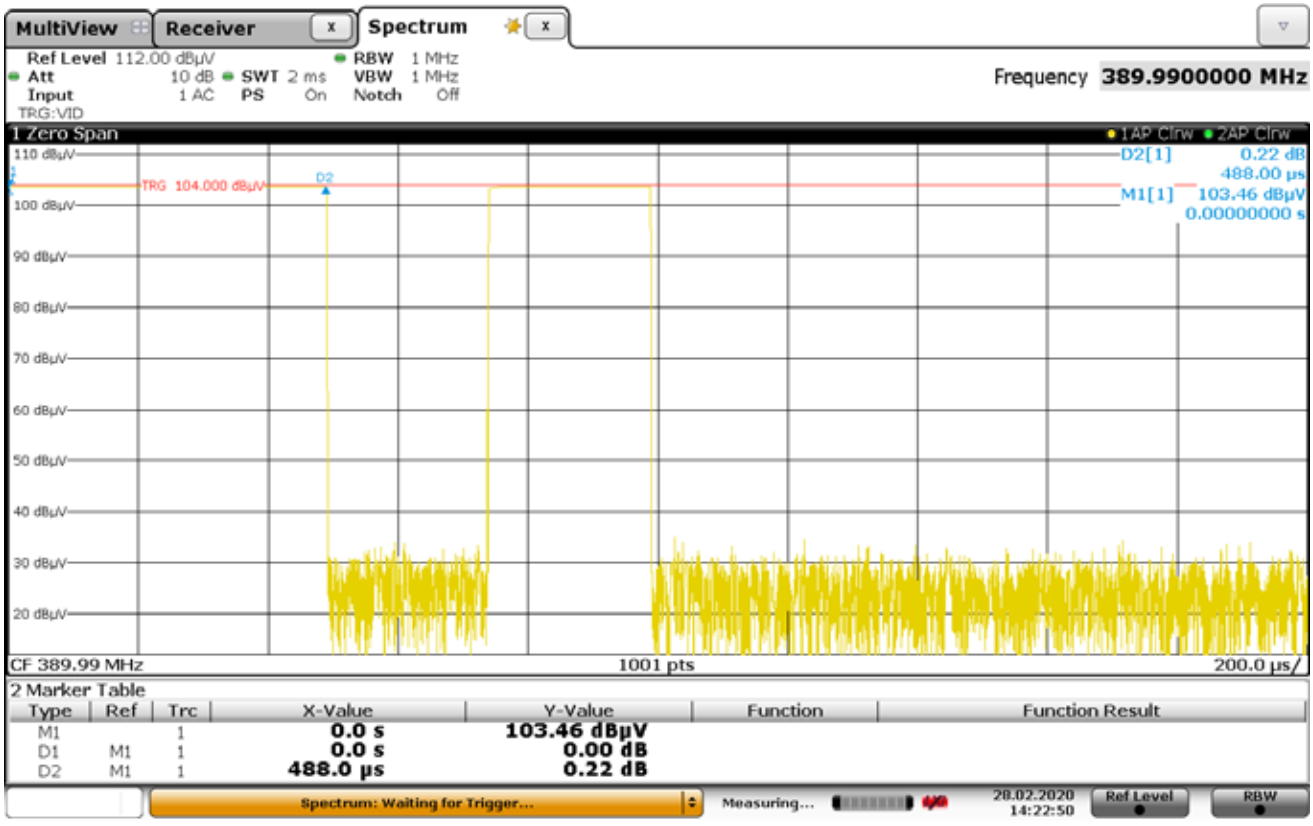
DUTY CYCLE



Date: 28.FEB.2020 13:43:42

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Wide Pulse = 488µs = 0.488ms

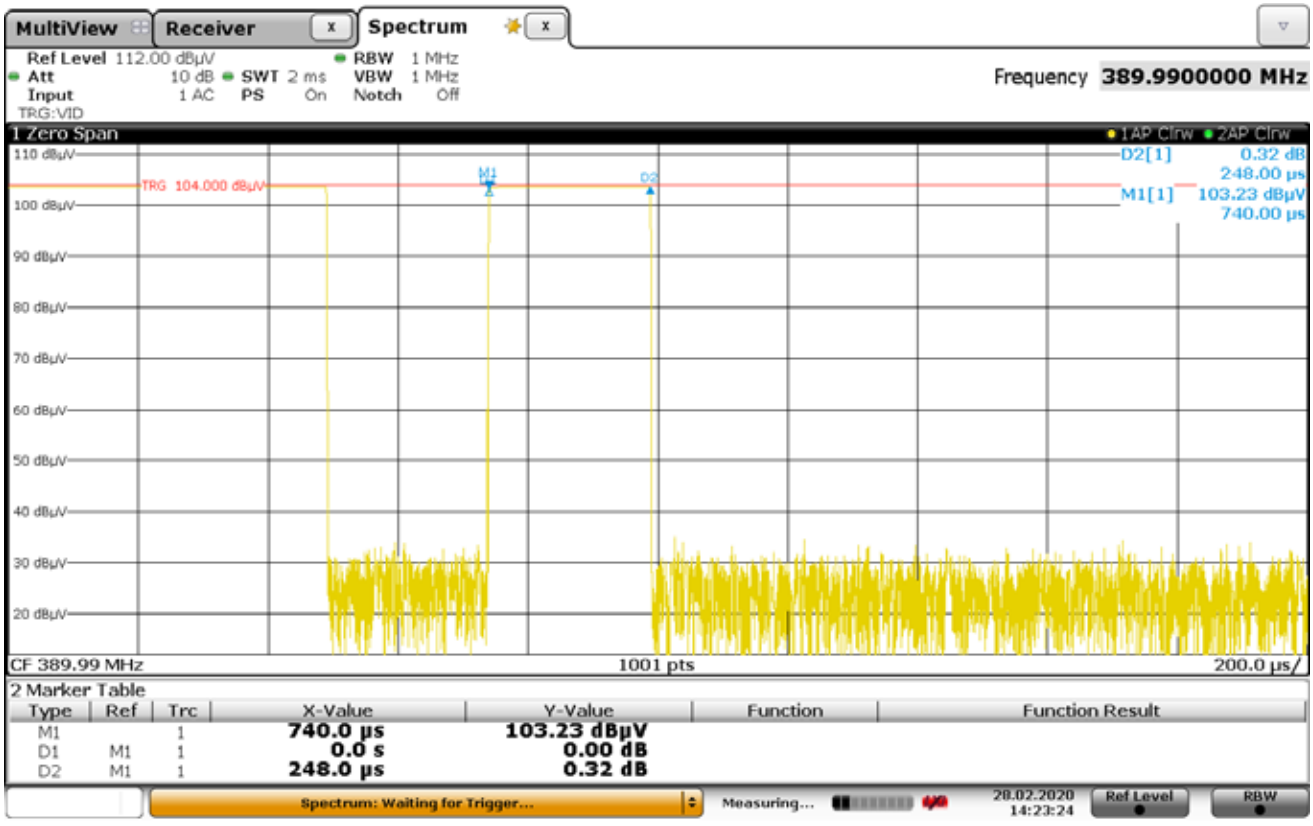
DUTY CYCLE – WIDE PULSE



Date: 28.FEB.2020 14:22:50

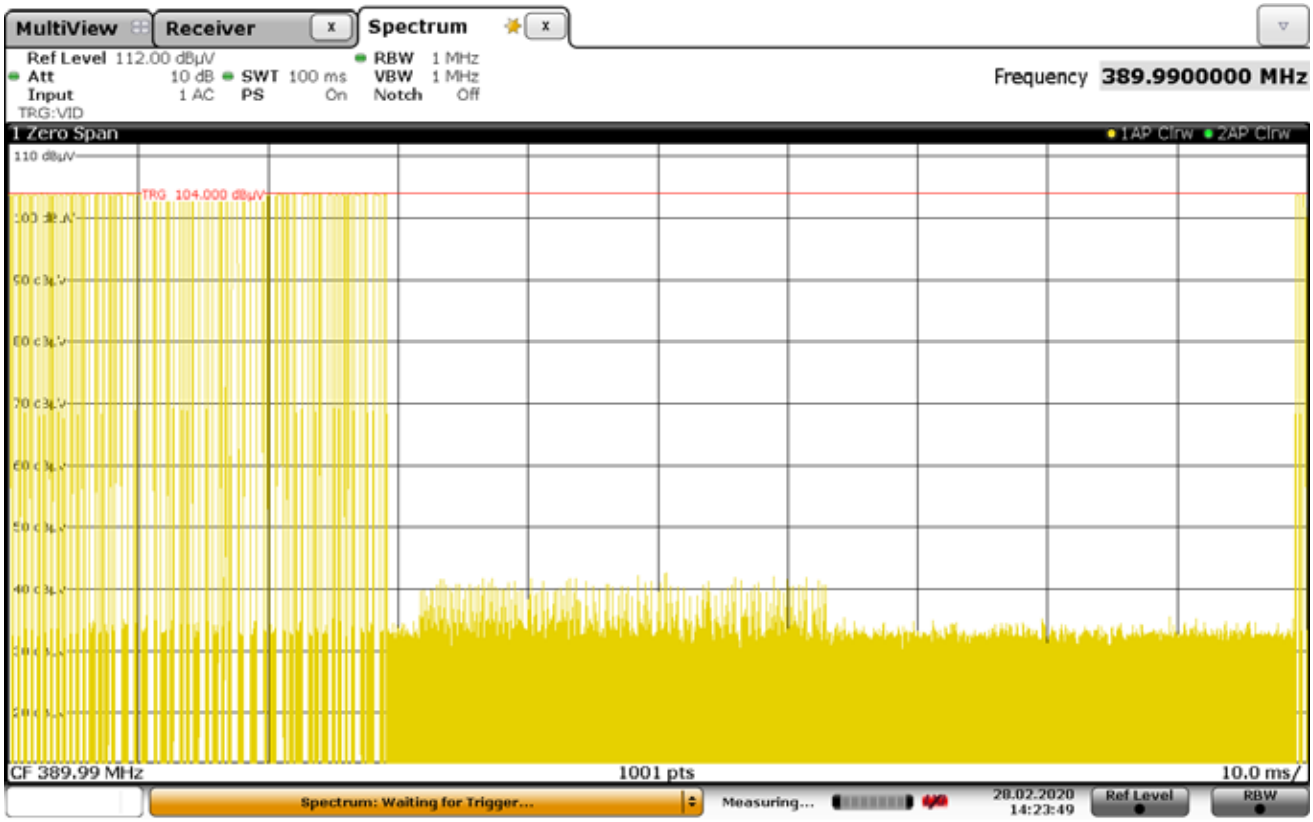
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Narrow Pulse = 248µs = 0.248ms

DUTY CYCLE – NARROW PULSE

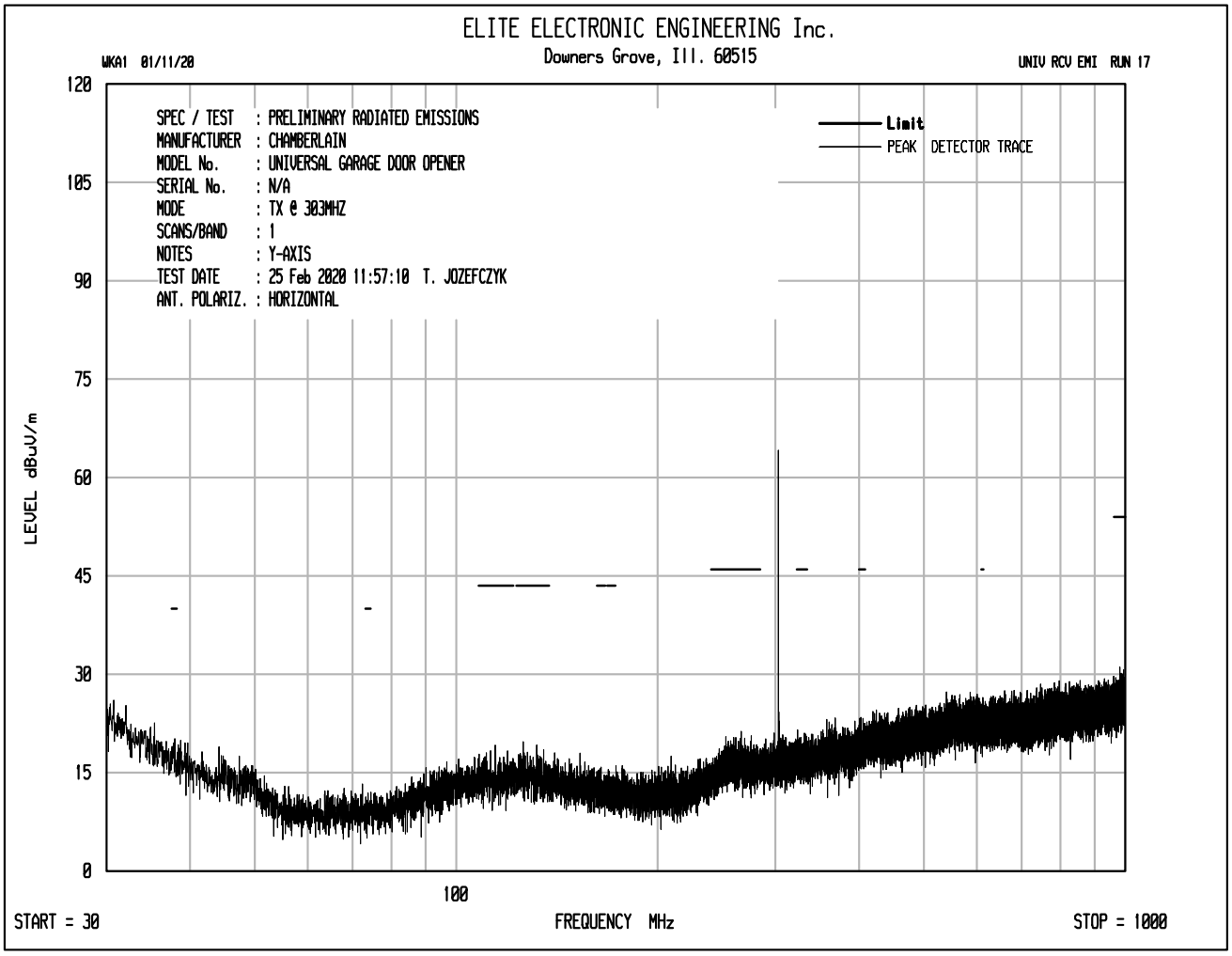


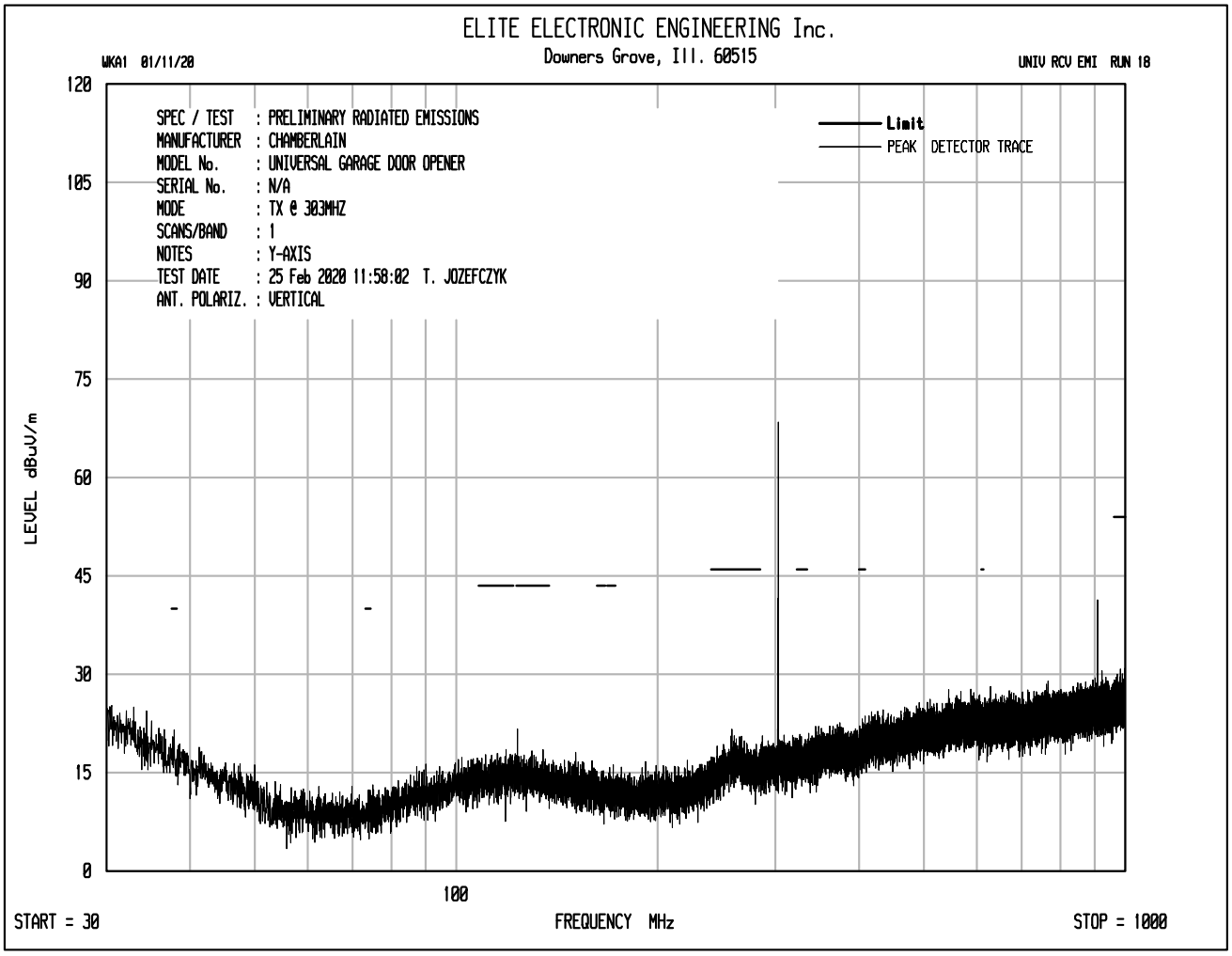
DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Duty Cycle
MODE	Tx – 390MHz (E Code)
DATE TESTED	February 28, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle Calculation: 18 × 0.488ms = 8.784ms 28 × 0.248ms = 6.944ms 8.784 + 6.944 = 15.728ms D.C = 20log(15.728/100) = **-16.06dB**

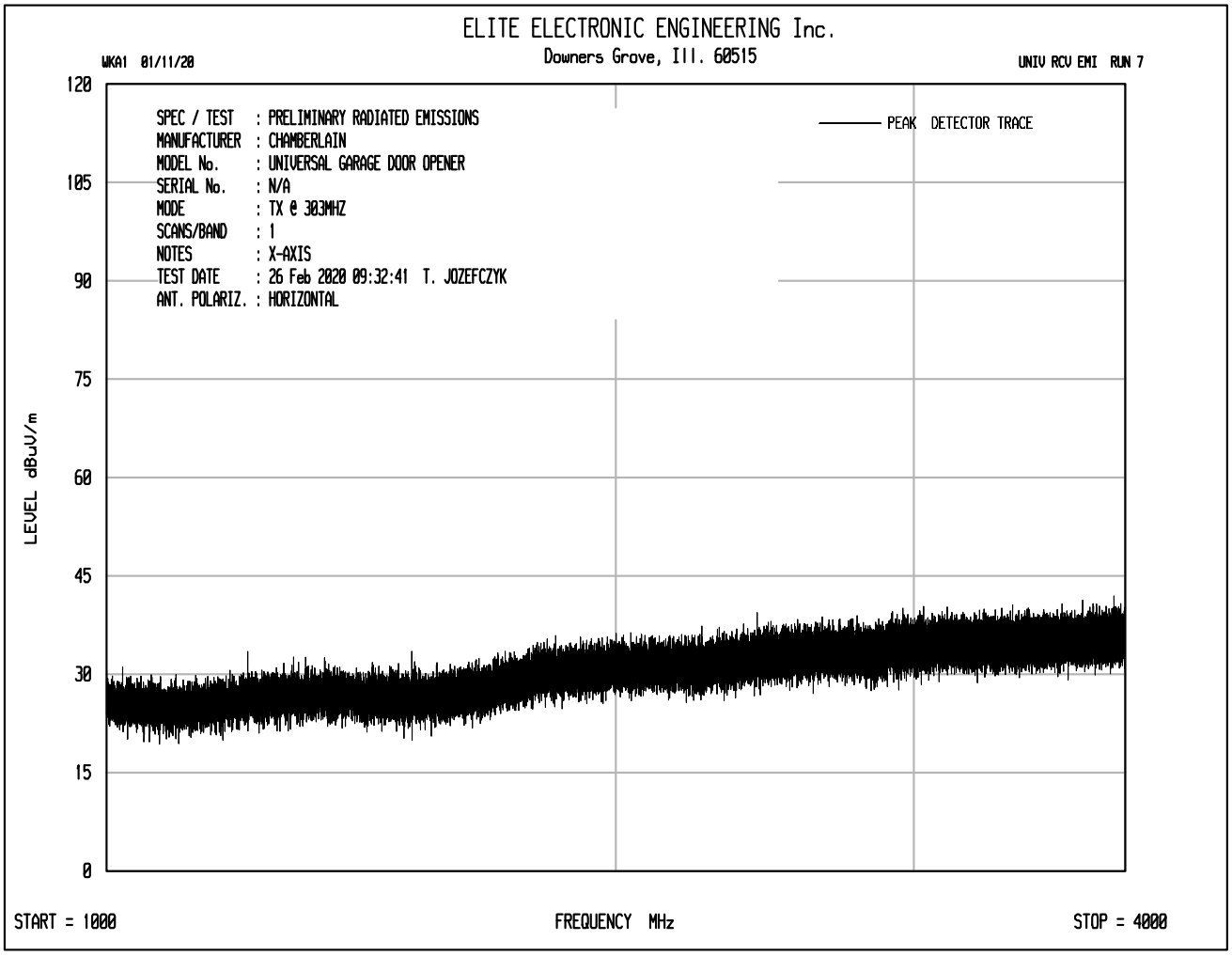
DUTY CYCLE

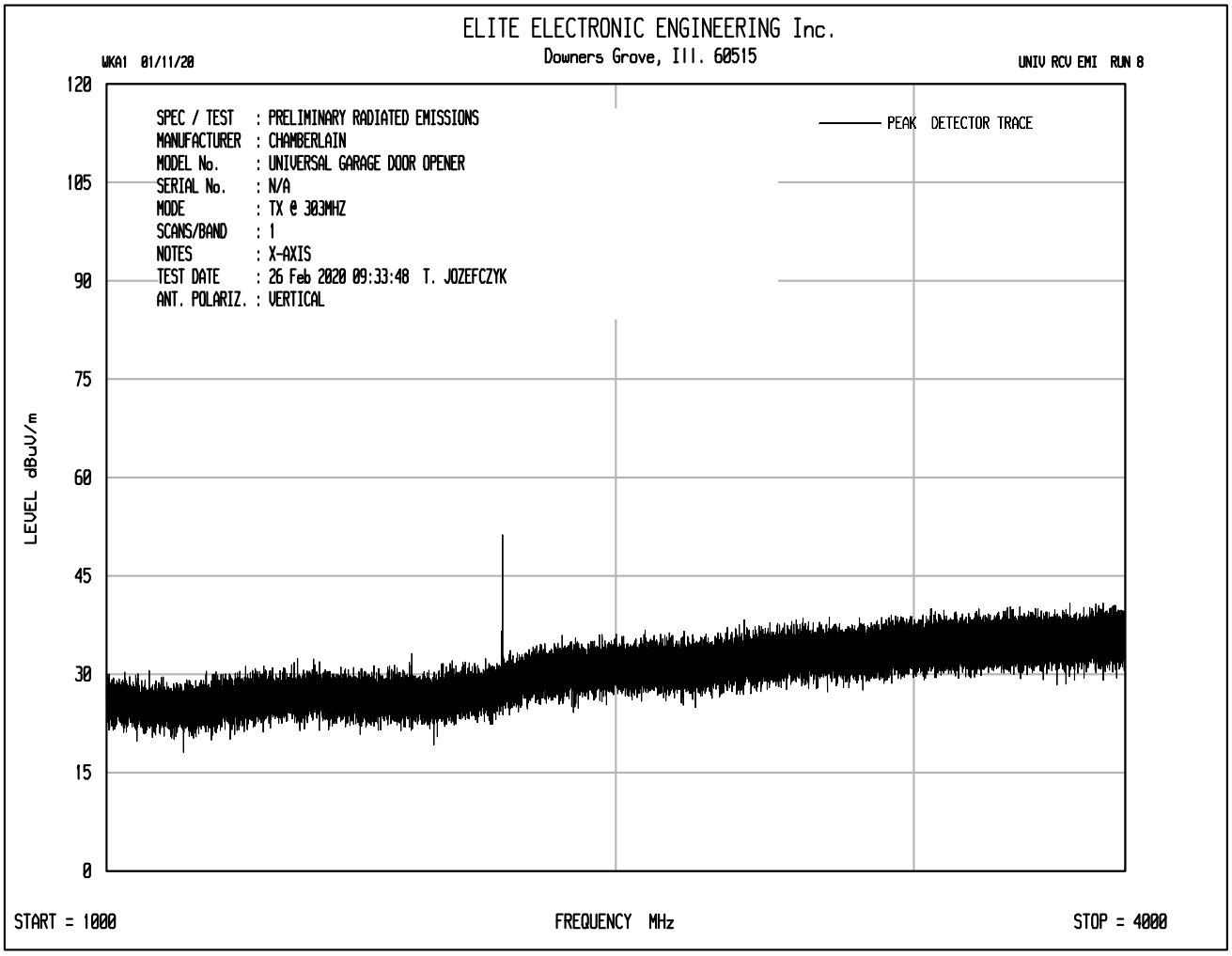


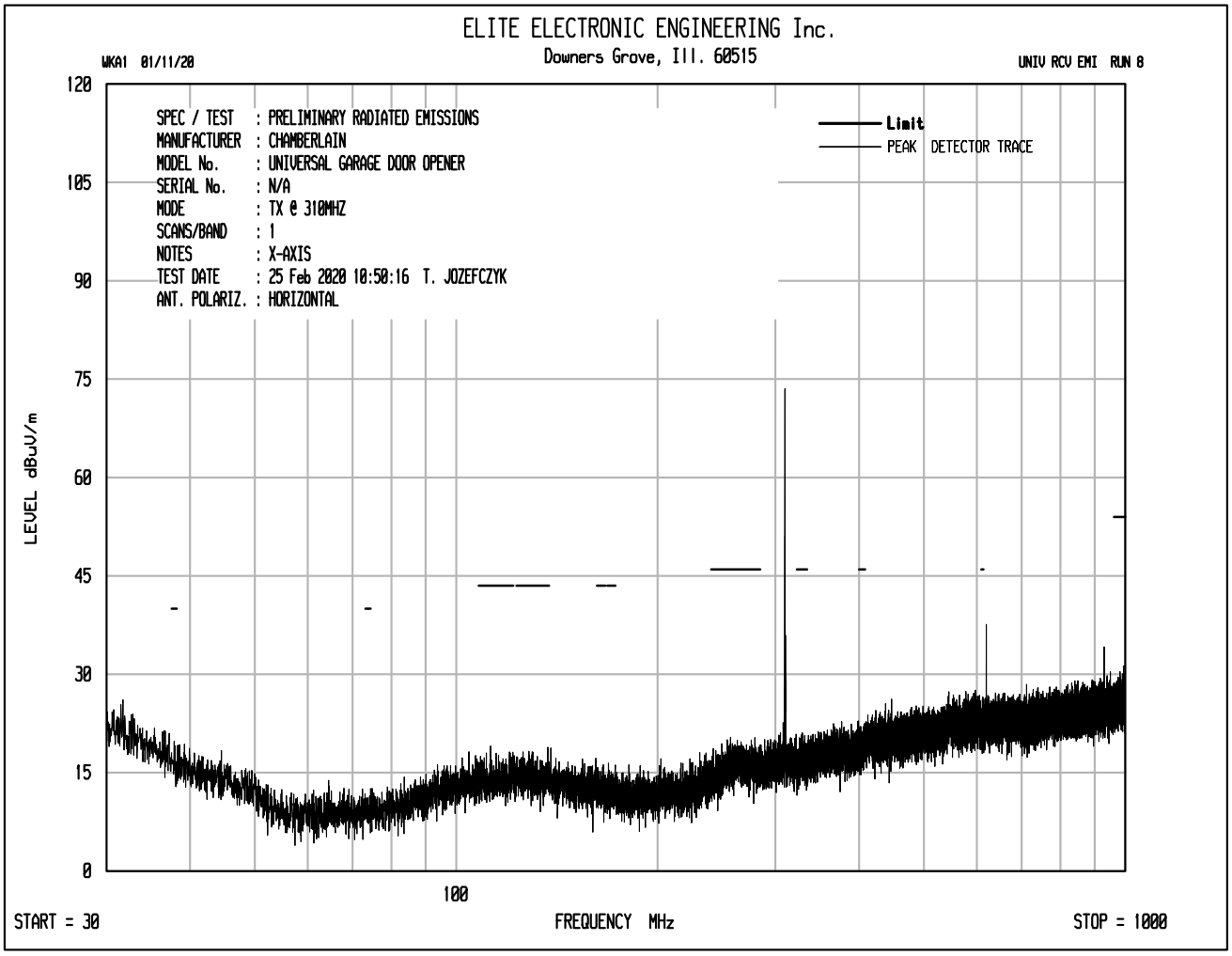
Date: 28.FEB.2020 14:23:49

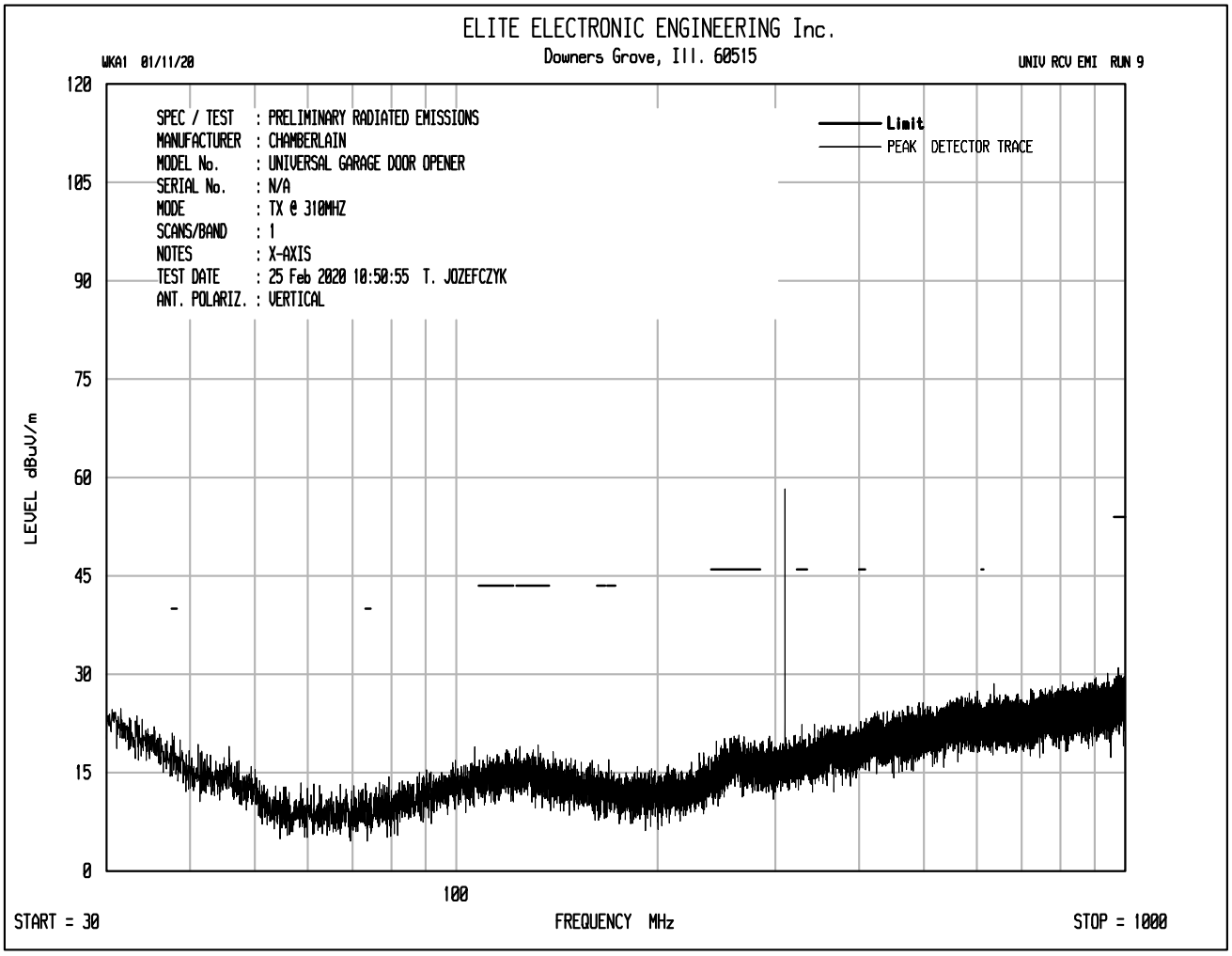

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 17
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 303MHZ
SCANS/BAND : 1
NOTES : Y-AXIS
TEST DATE : 25 Feb 2020 11:57:10 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

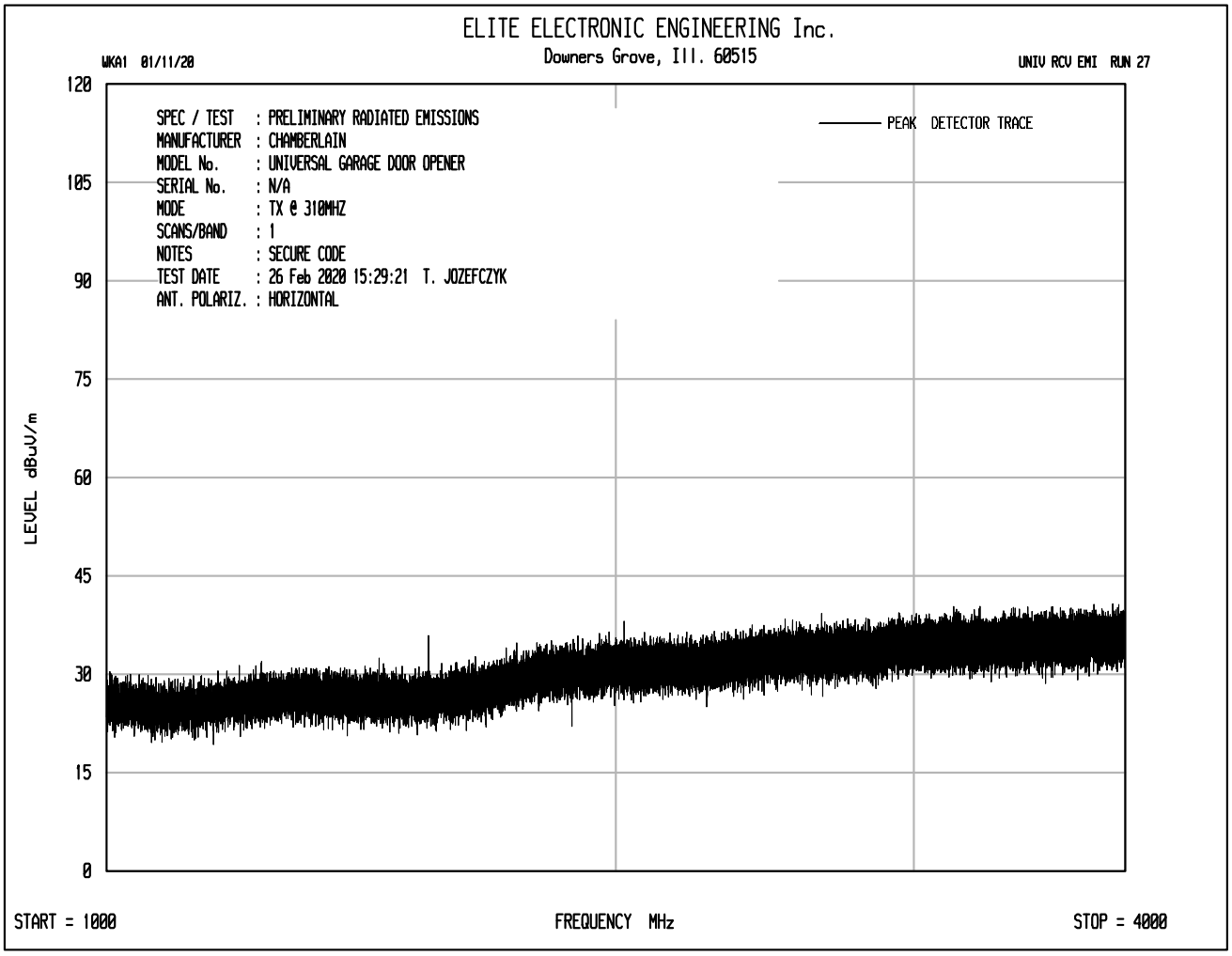

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 18
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 303MHZ
SCANS/BAND : 1
NOTES : Y-AXIS
TEST DATE : 25 Feb 2020 11:58:02 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

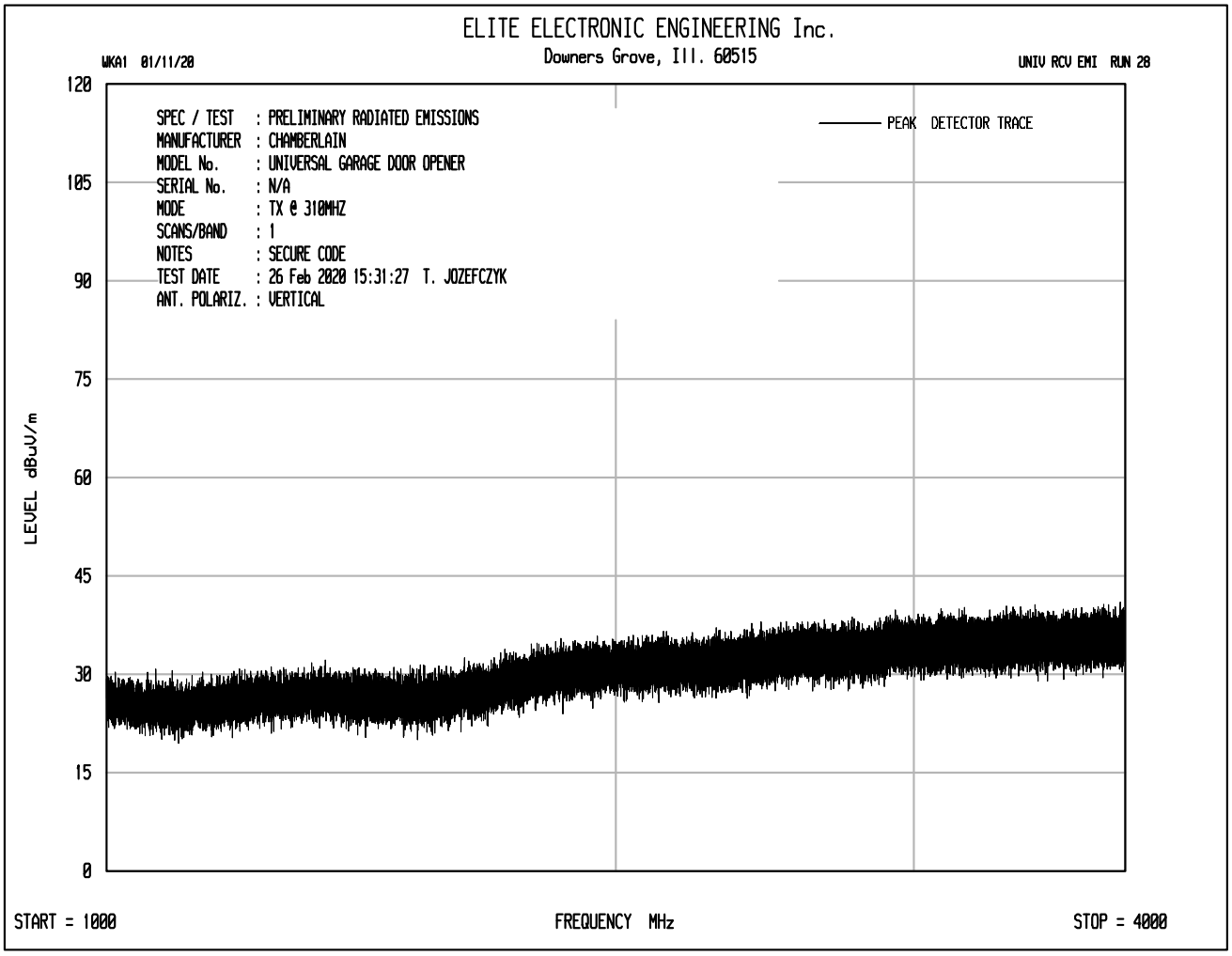

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 303MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 26 Feb 2020 09:32:41 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

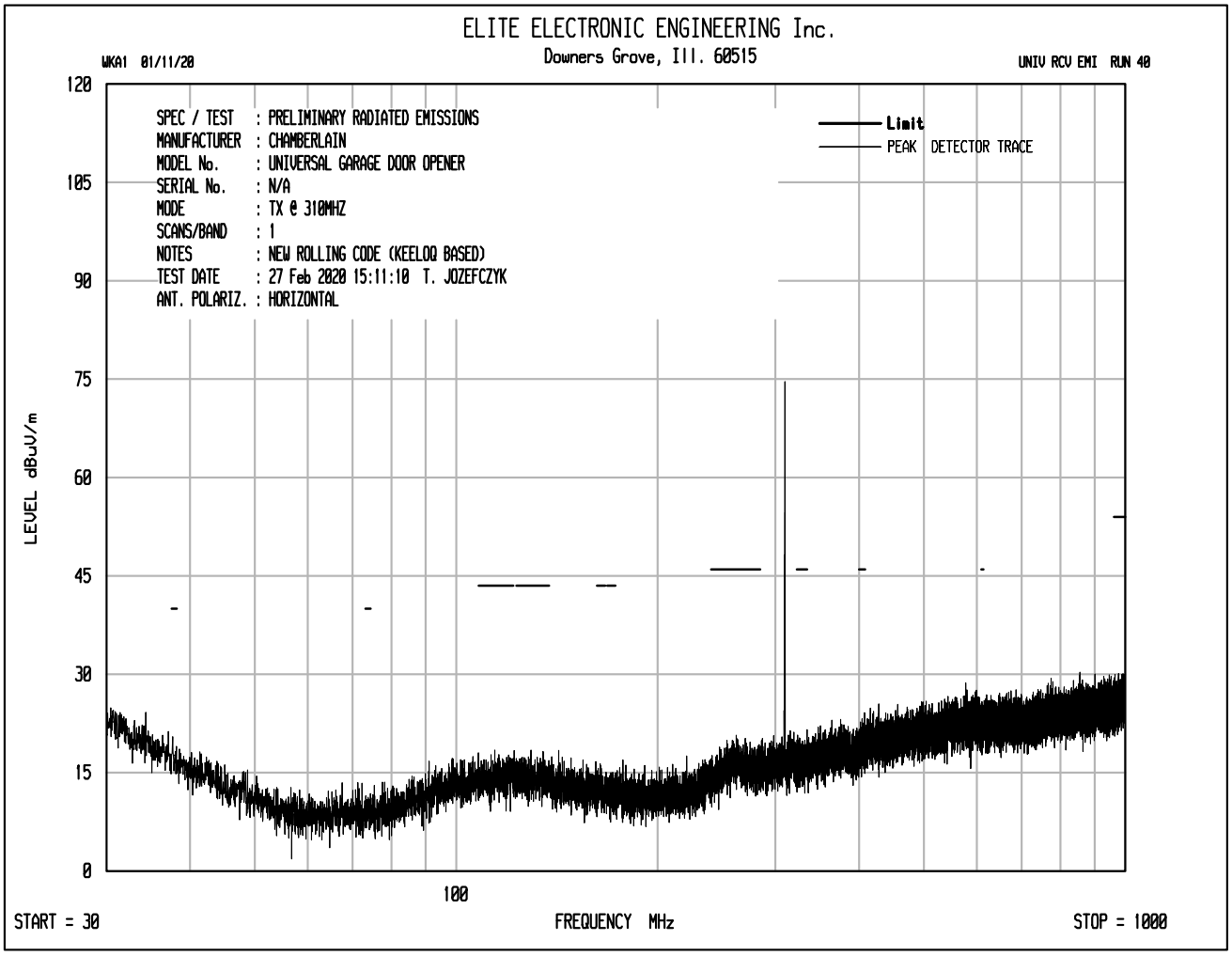

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 303MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 26 Feb 2020 09:33:48 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

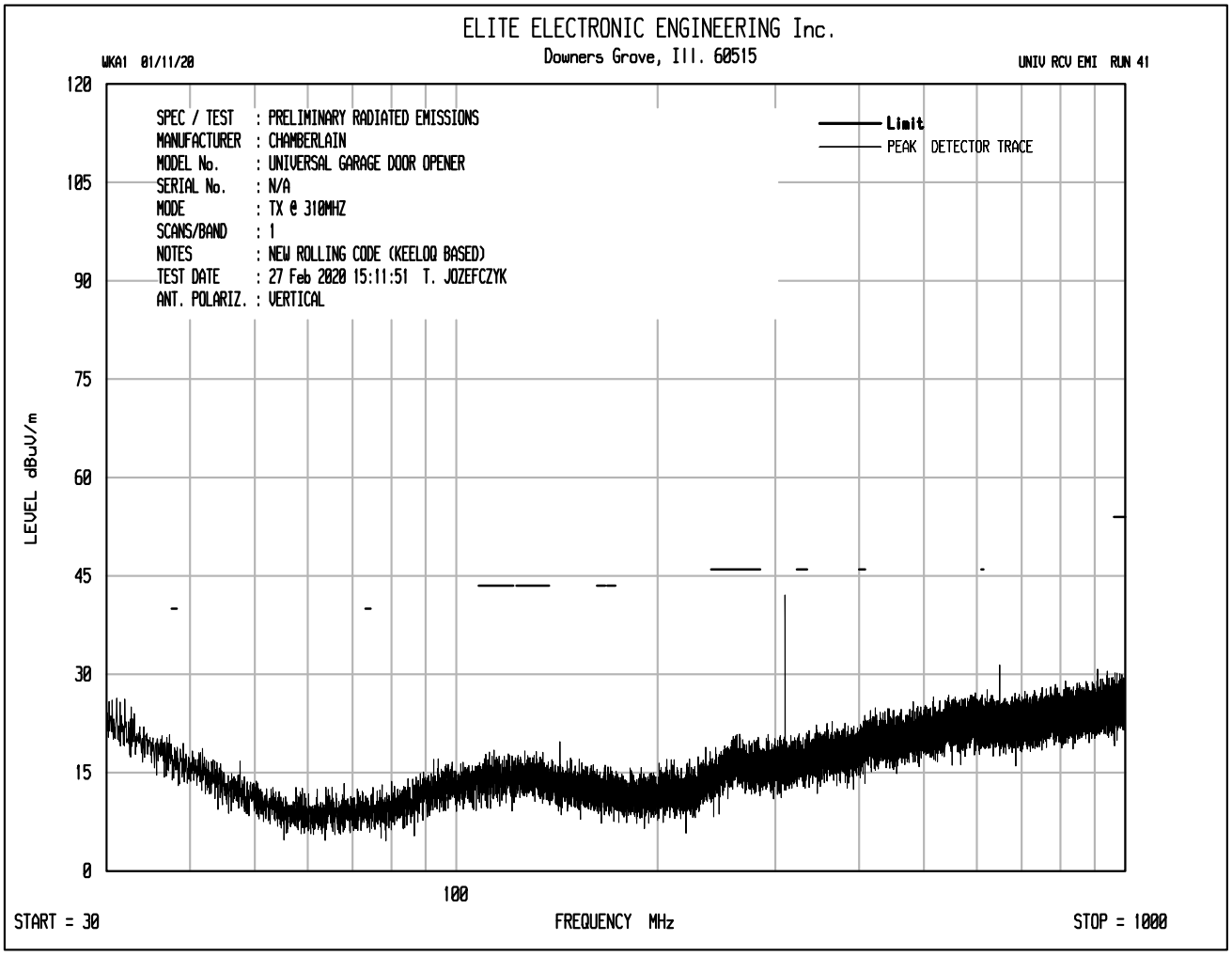

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 10:50:16 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

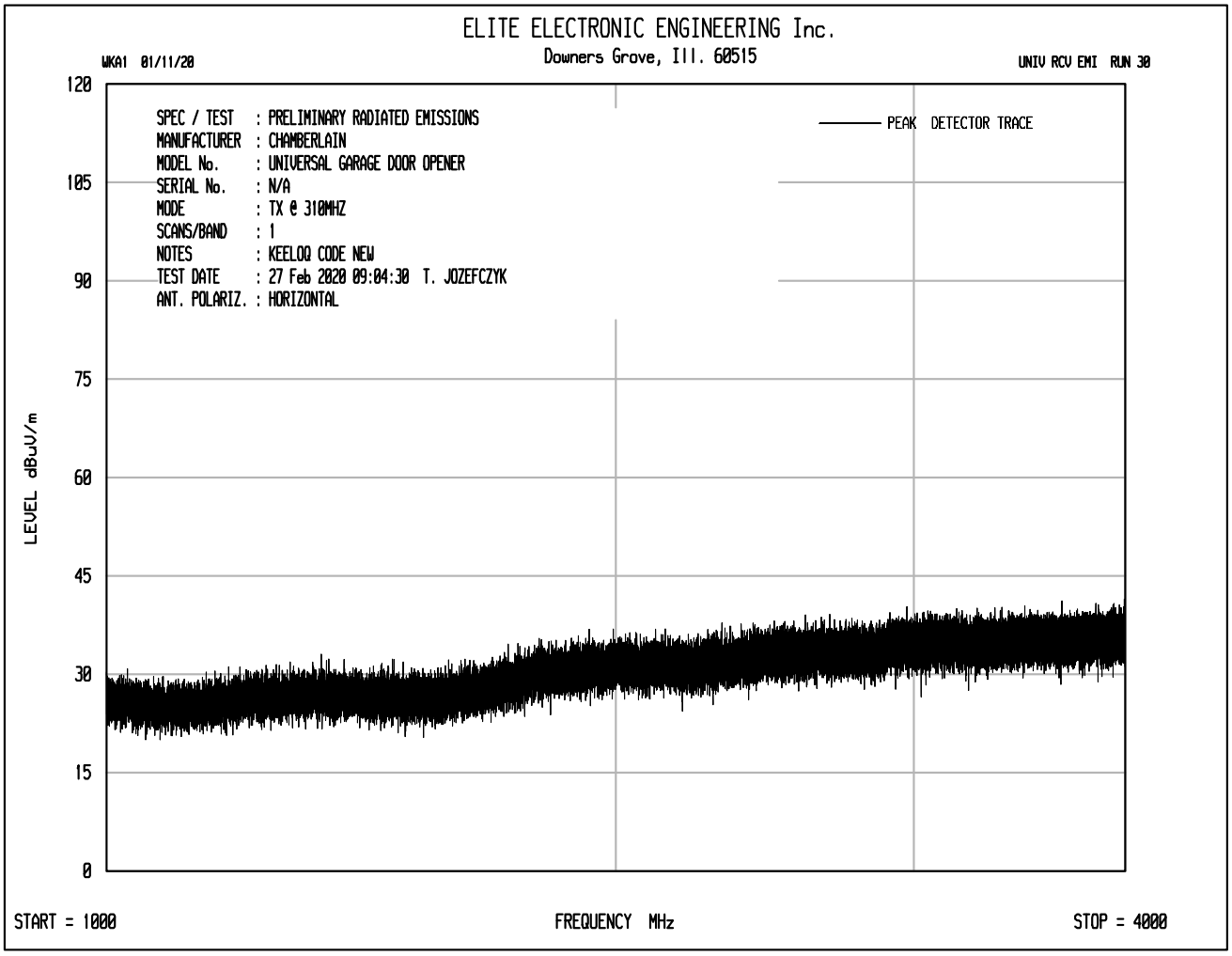

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 9
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 10:50:55 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

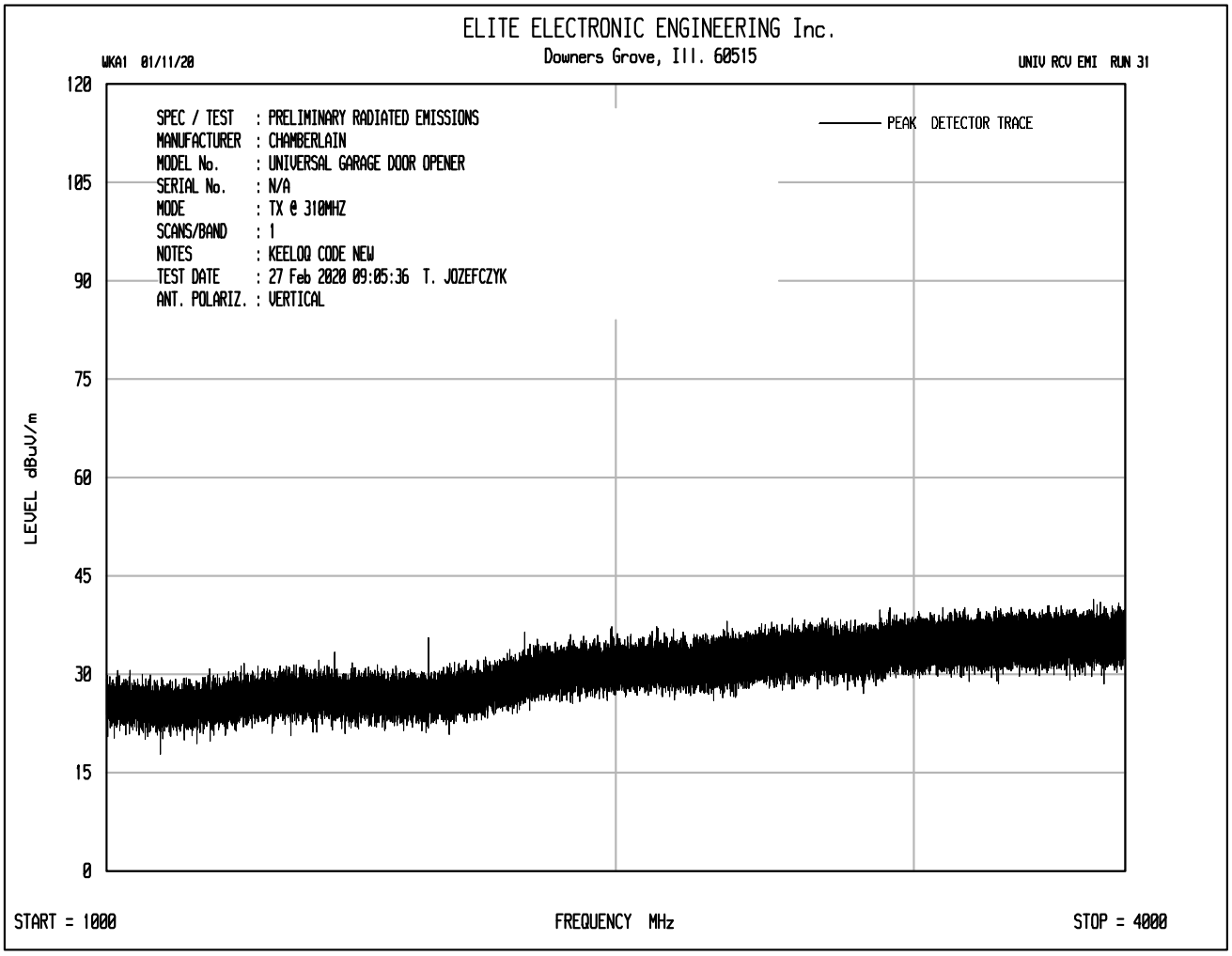

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 27
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ
SCANS/BAND : 1
NOTES : SECURE CODE
TEST DATE : 26 Feb 2020 15:29:21 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

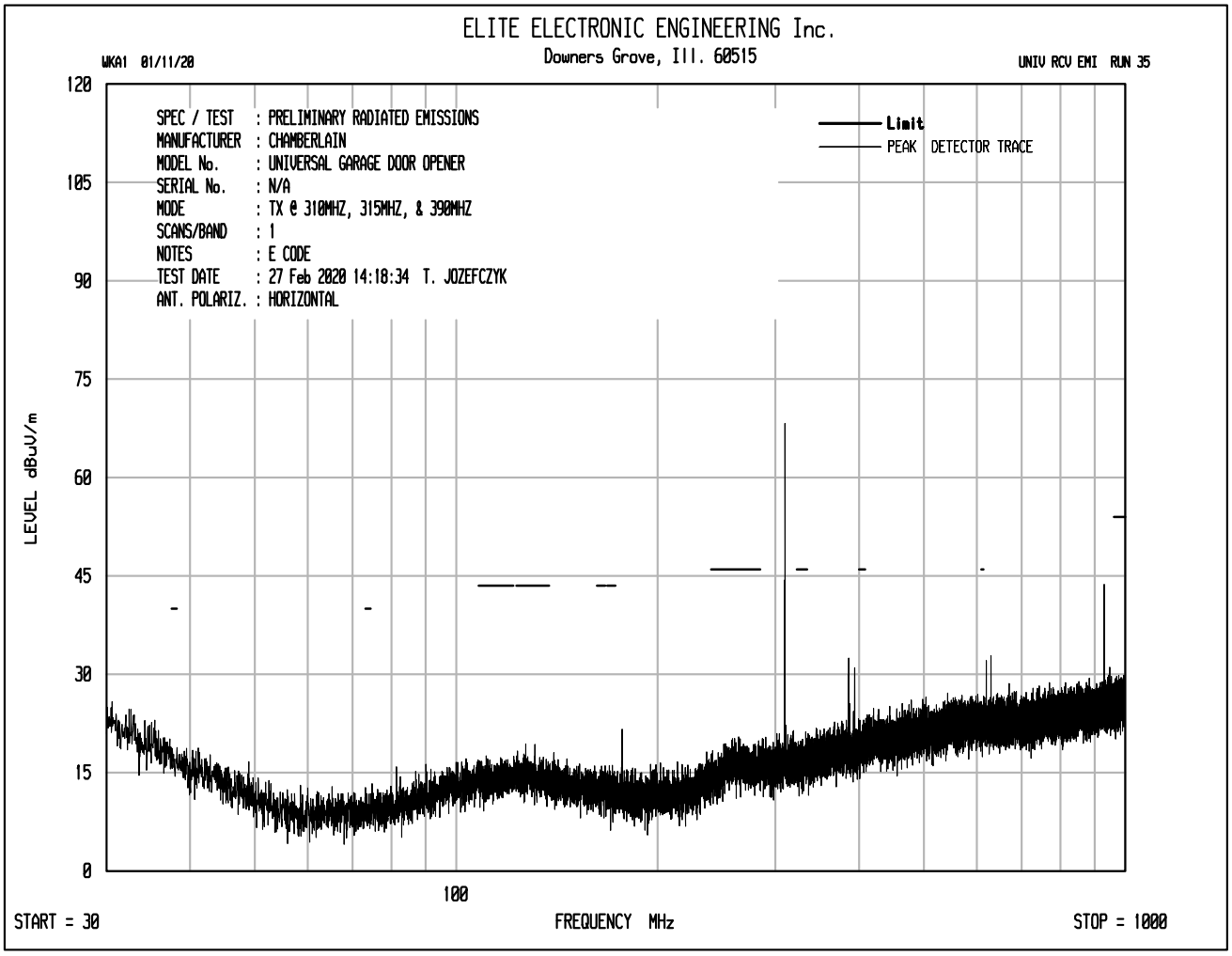

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 28
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ
SCANS/BAND : 1
NOTES : SECURE CODE
TEST DATE : 26 Feb 2020 15:31:27 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

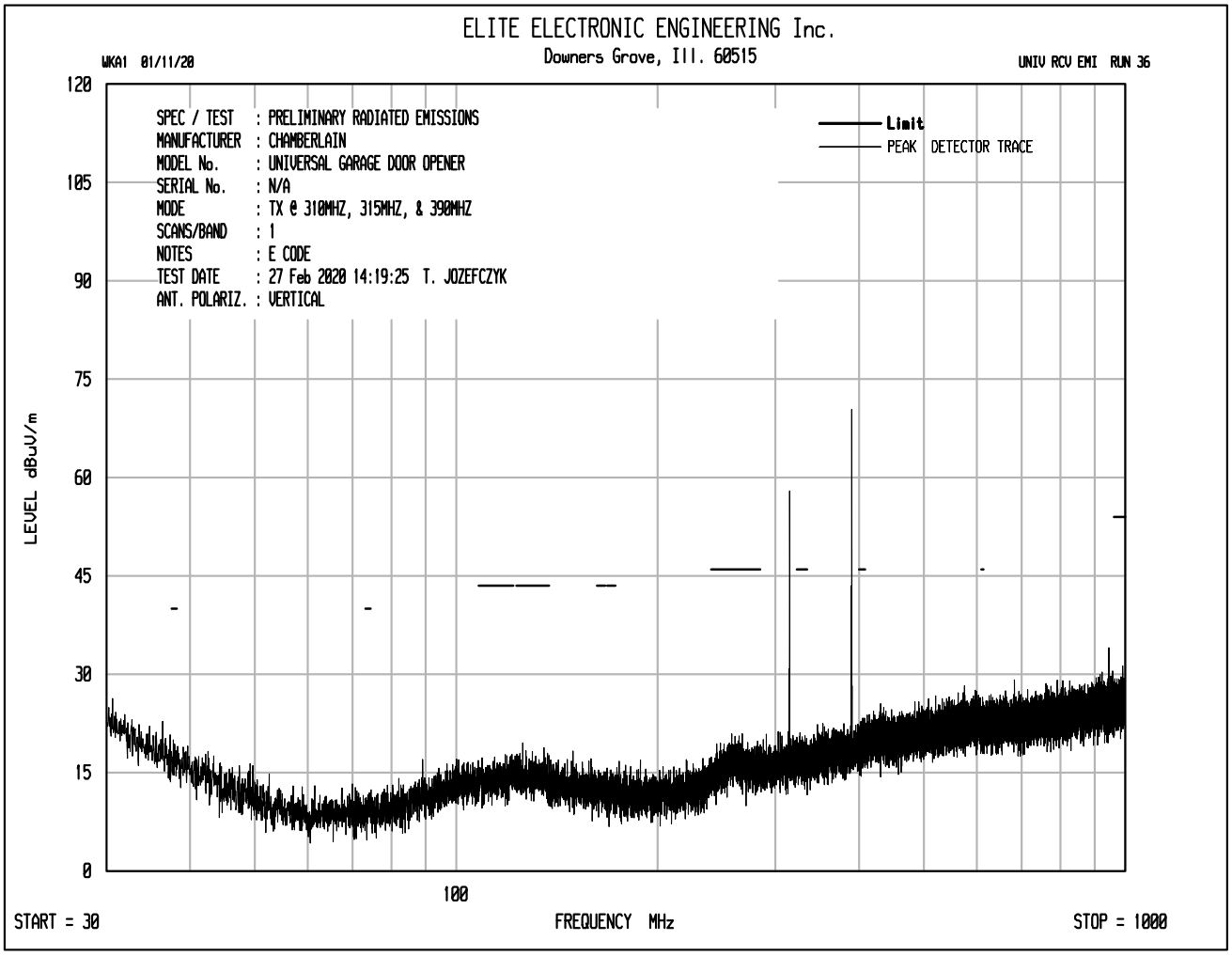

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 40
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ
SCANS/BAND : 1
NOTES : NEW ROLLING CODE (KEELOQ BASED)
TEST DATE : 27 Feb 2020 15:11:10 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

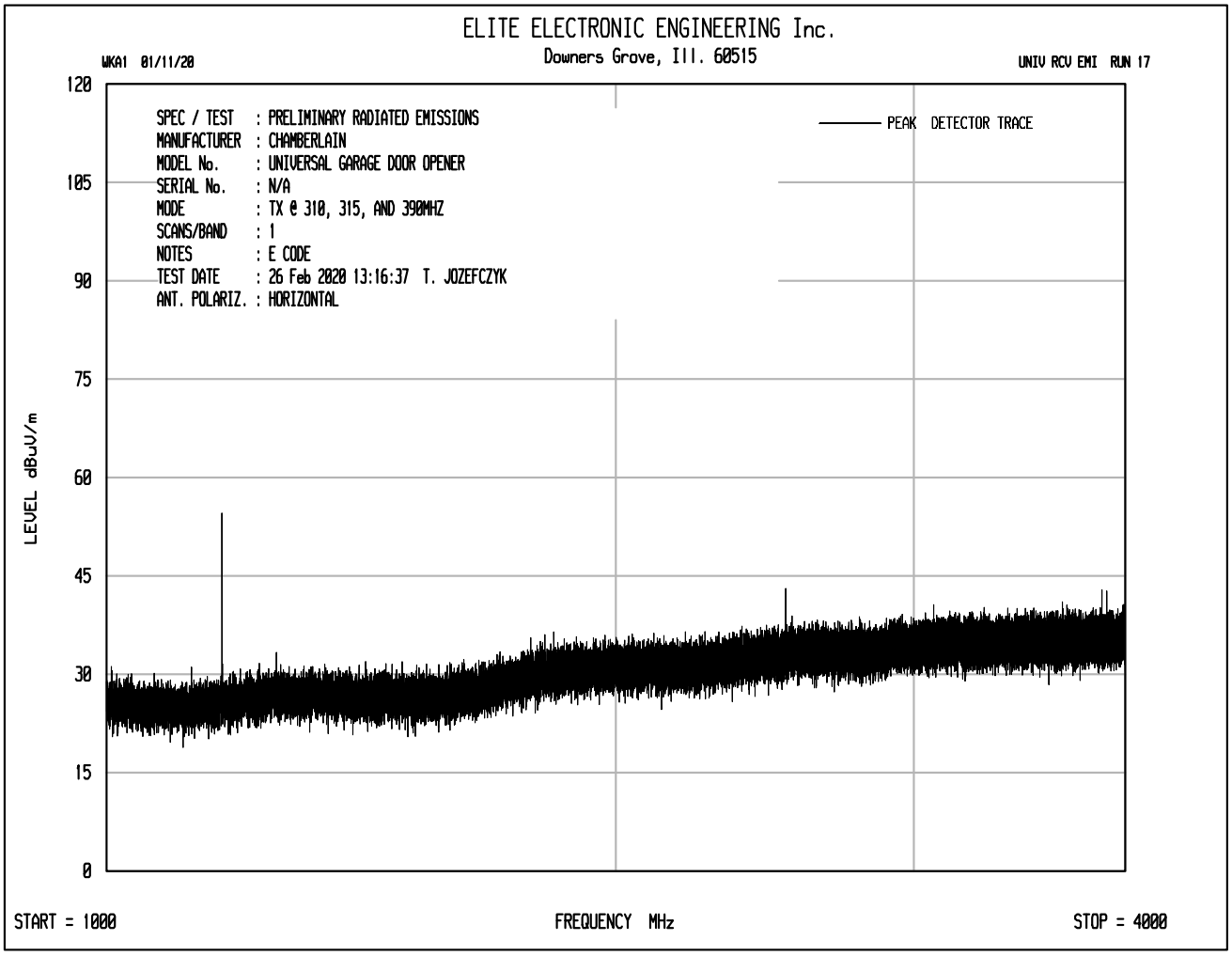

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 41
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ
SCANS/BAND : 1
NOTES : NEW ROLLING CODE (KEELOQ BASED)
TEST DATE : 27 Feb 2020 15:11:51 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

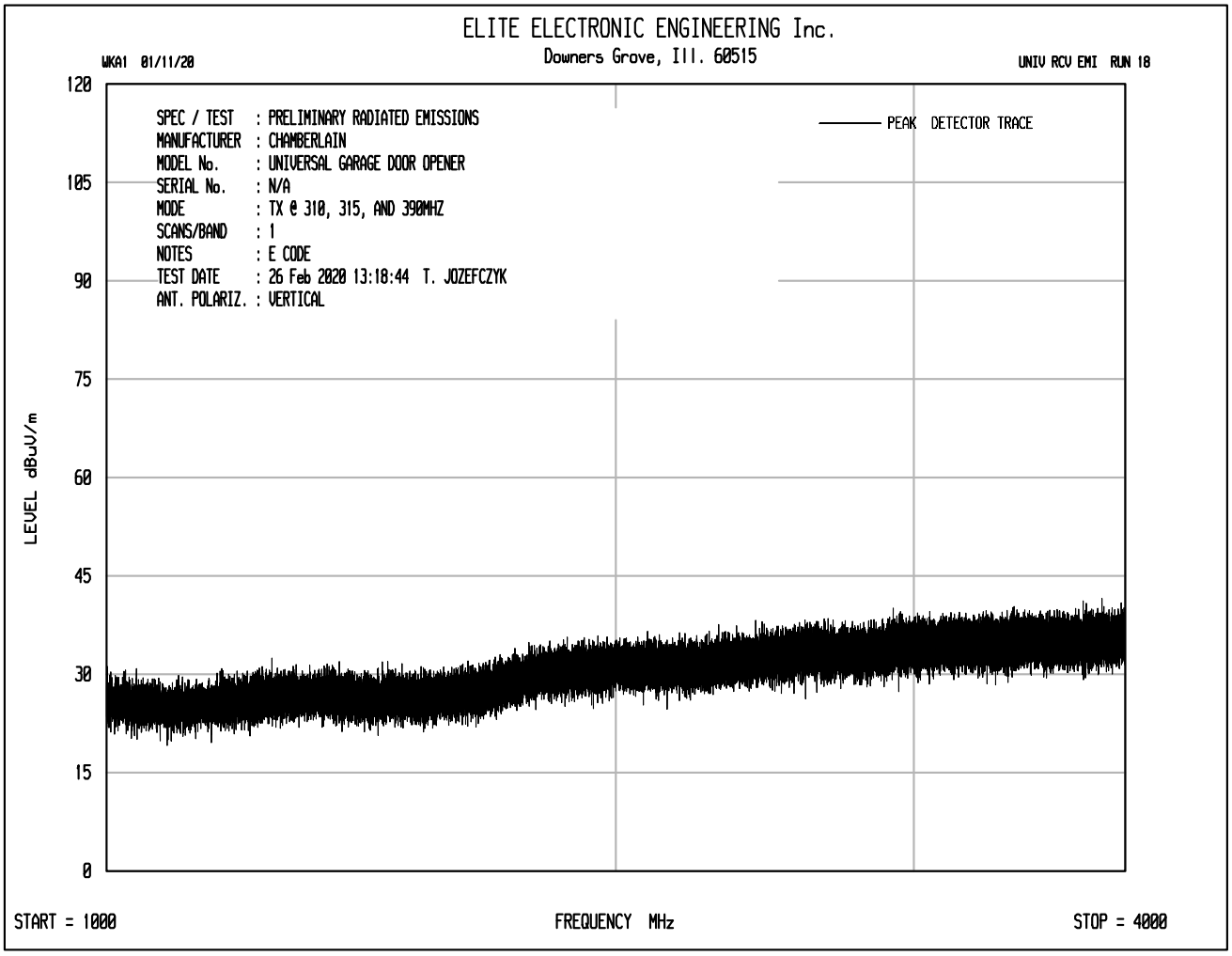

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 30
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ
SCANS/BAND : 1
NOTES : KEELOQ CODE NEW
TEST DATE : 27 Feb 2020 09:04:30 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

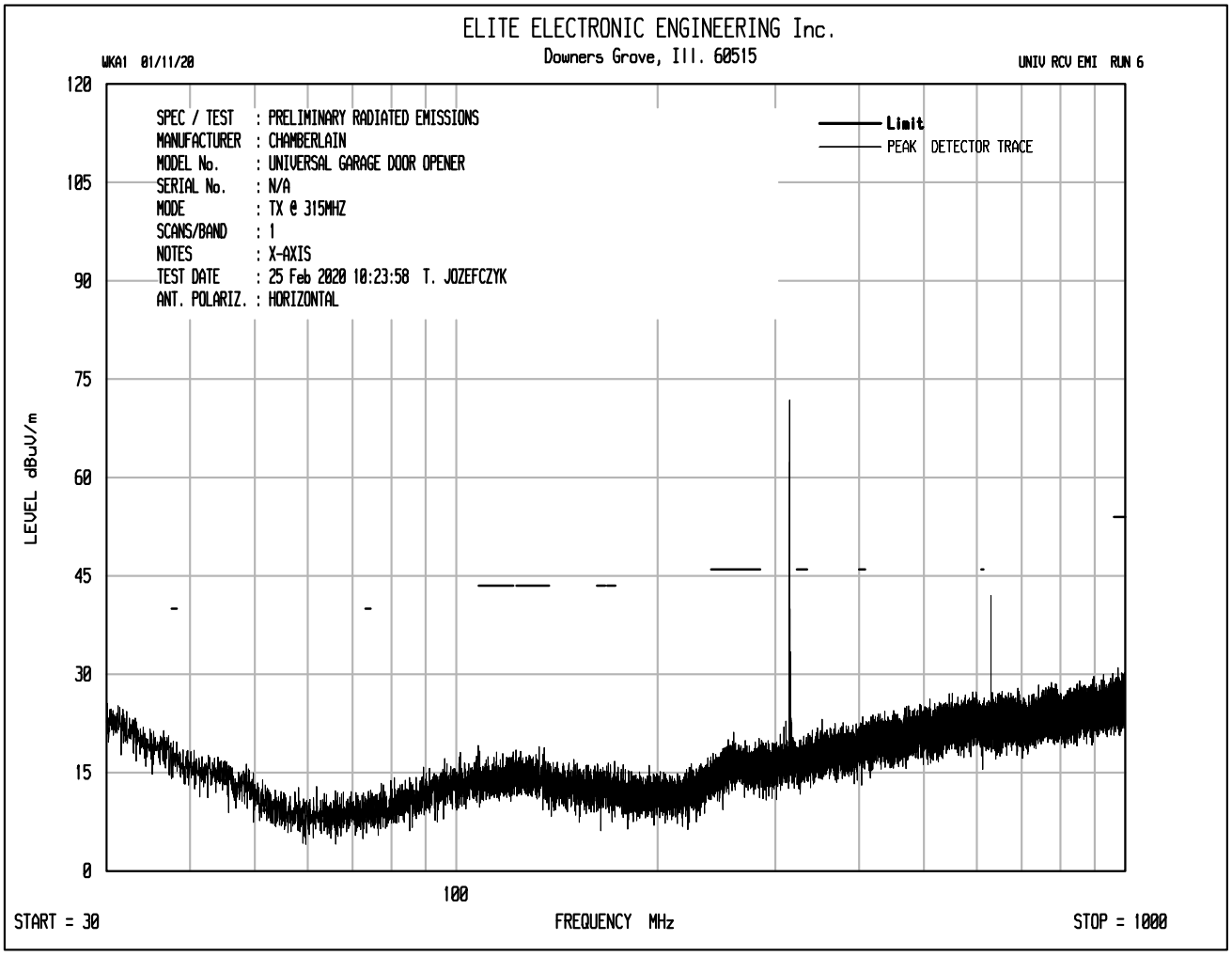

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 31
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ
SCANS/BAND : 1
NOTES : KEELOQ CODE NEW
TEST DATE : 27 Feb 2020 09:05:36 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

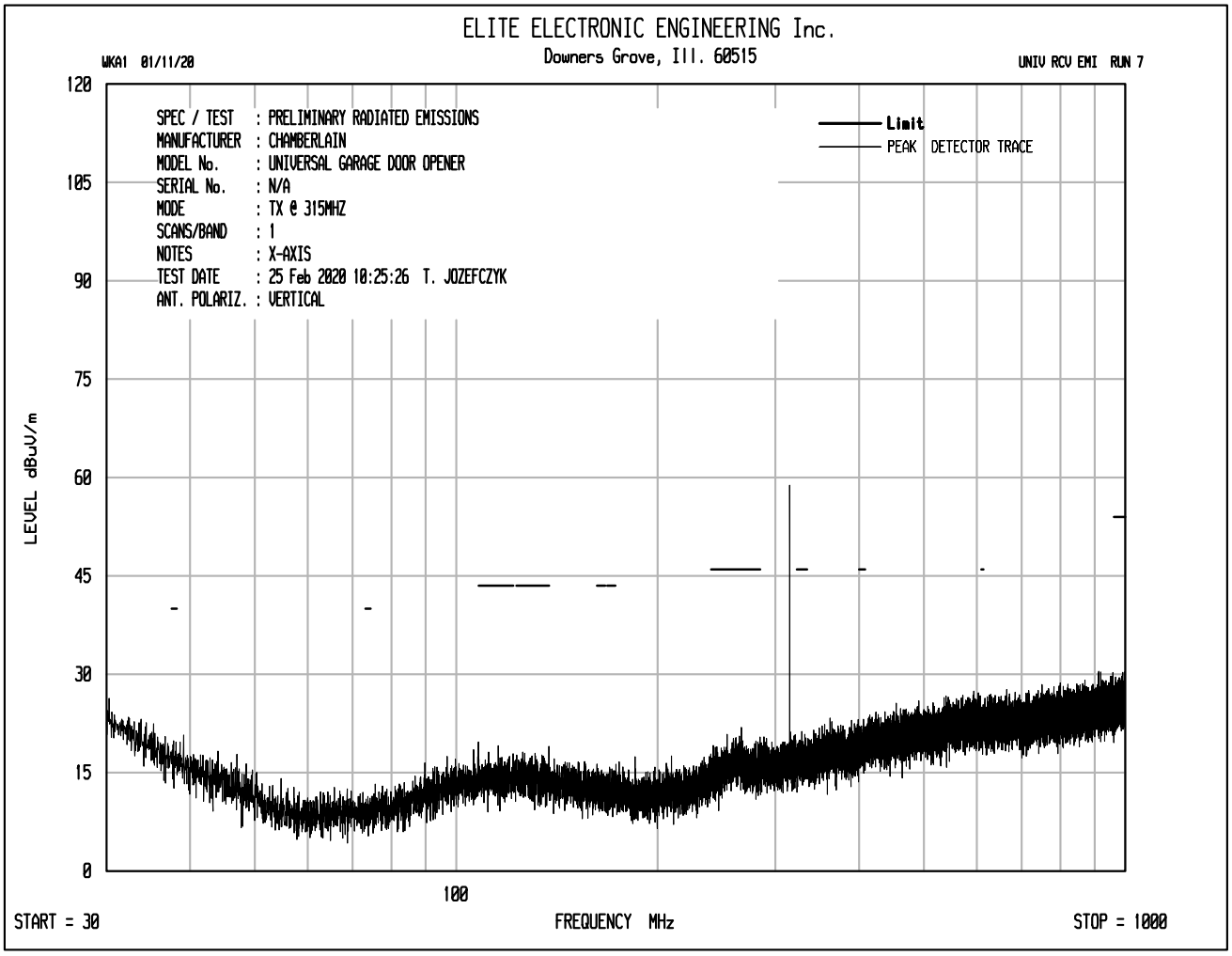

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 35
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ, 315MHZ, & 390MHZ
SCANS/BAND : 1
NOTES : E CODE
TEST DATE : 27 Feb 2020 14:18:34 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

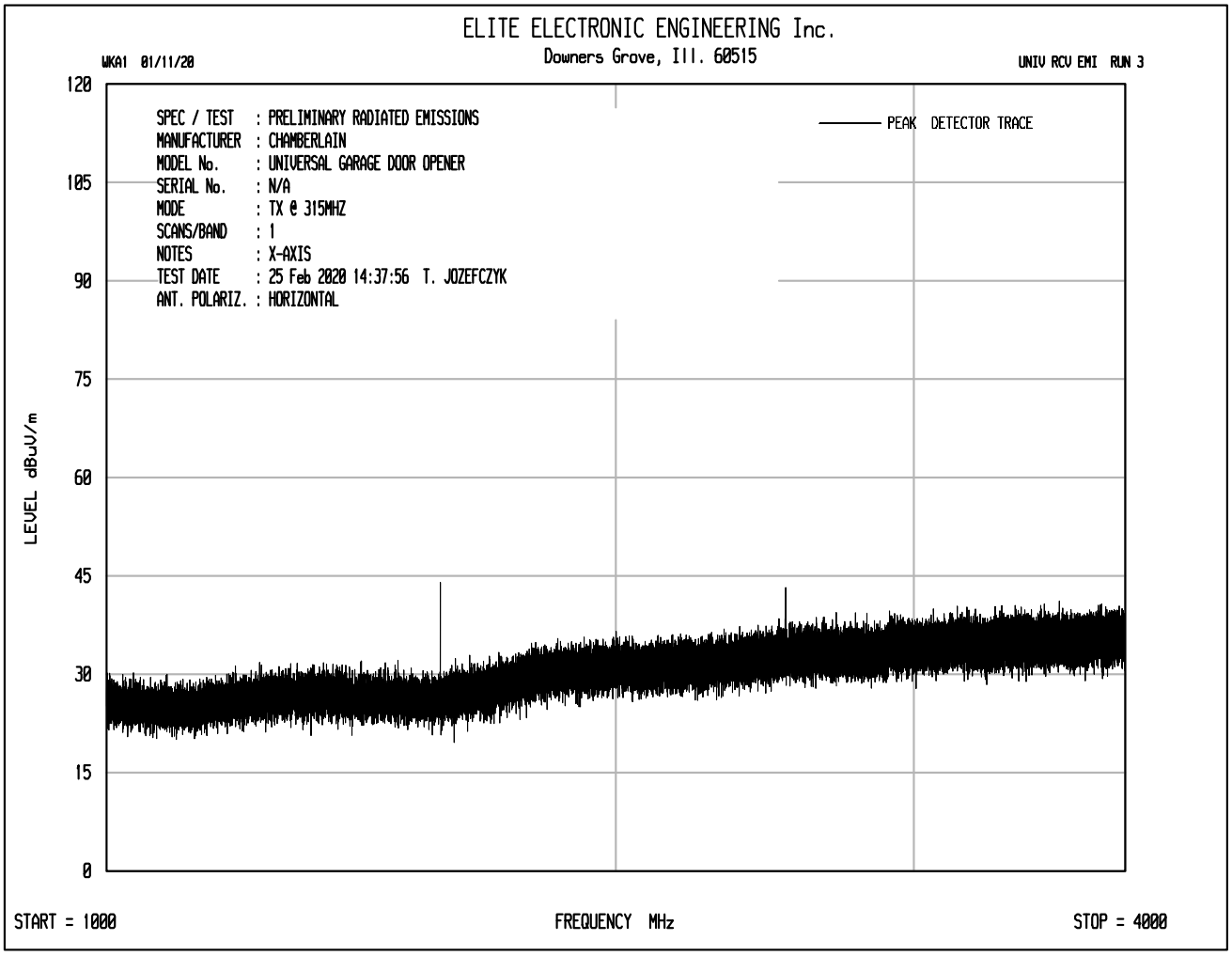

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 36
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310MHZ, 315MHZ, & 390MHZ
SCANS/BAND : 1
NOTES : E CODE
TEST DATE : 27 Feb 2020 14:19:25 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

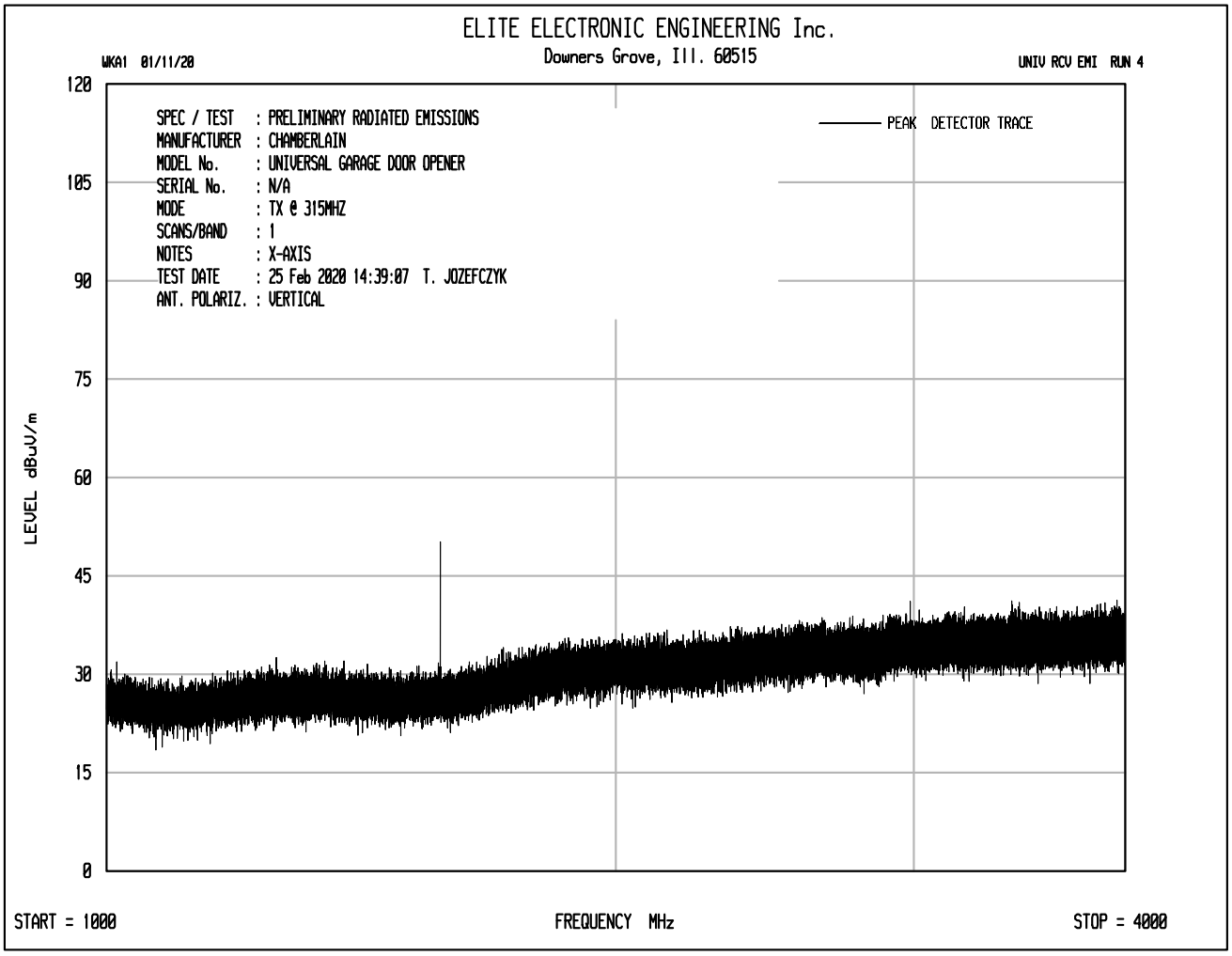

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 17
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310, 315, AND 390MHZ
SCANS/BAND : 1
NOTES : E CODE
TEST DATE : 26 Feb 2020 13:16:37 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

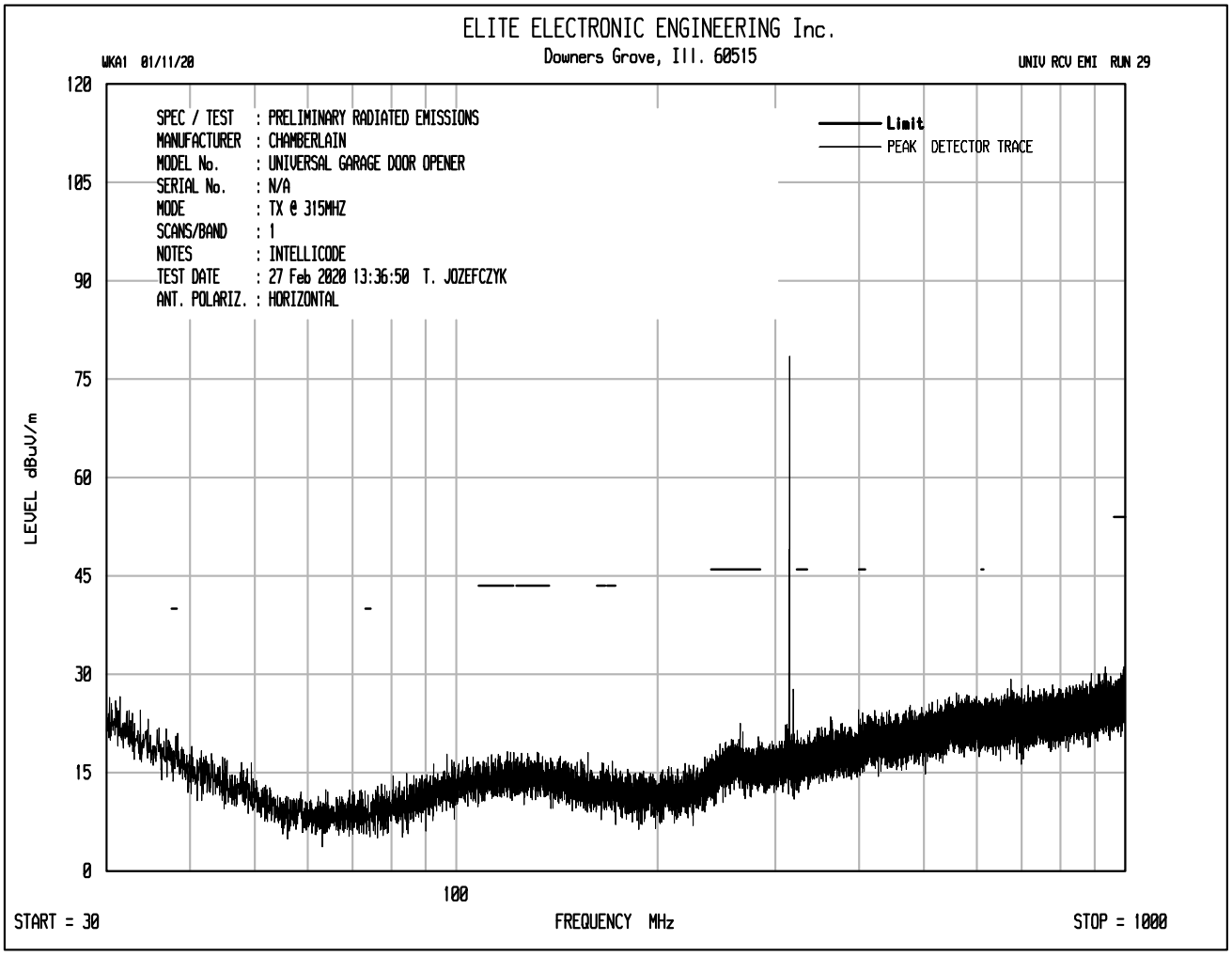

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 18
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 310, 315, AND 390MHZ
SCANS/BAND : 1
NOTES : E CODE
TEST DATE : 26 Feb 2020 13:18:44 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

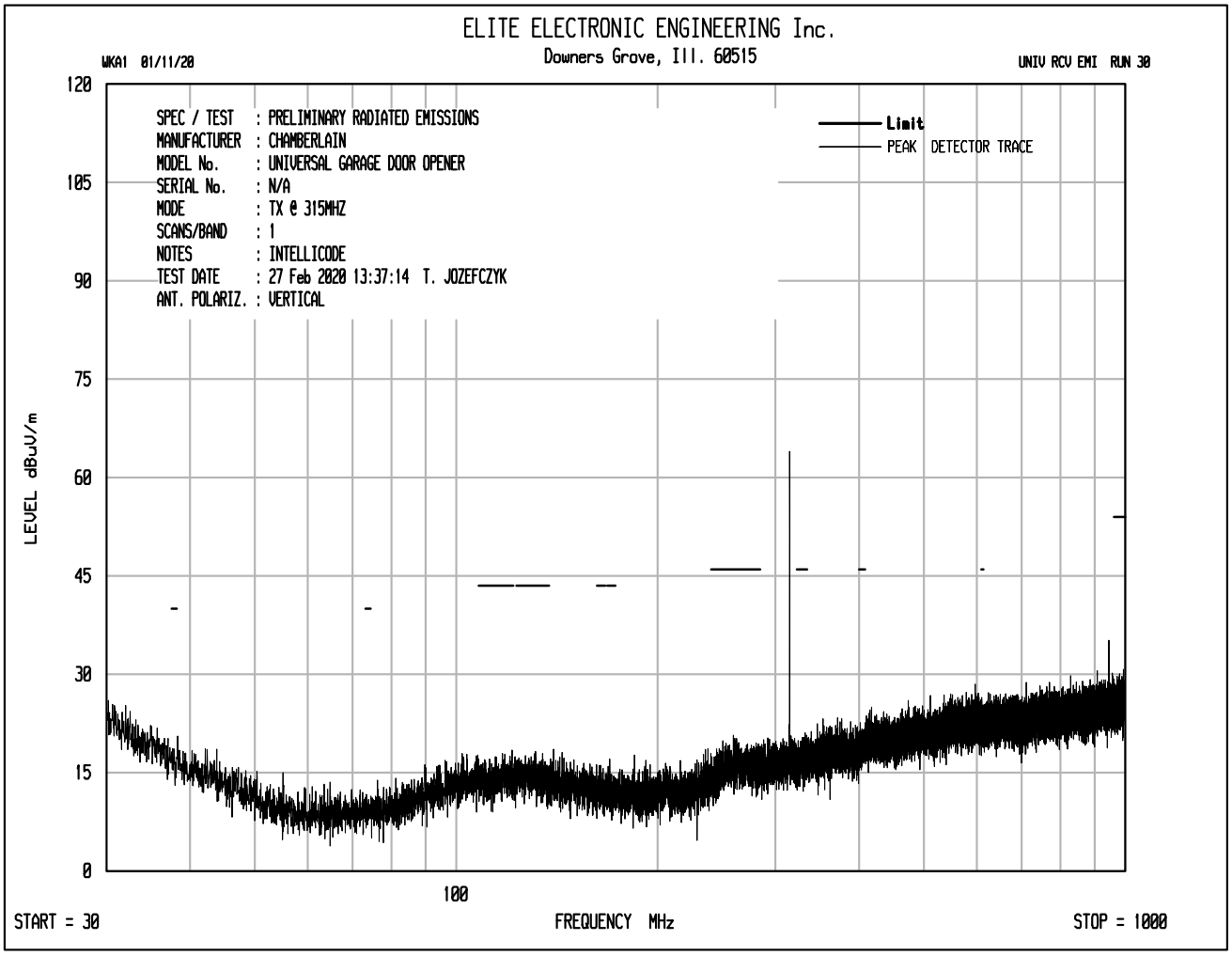

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 315MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 10:23:58 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

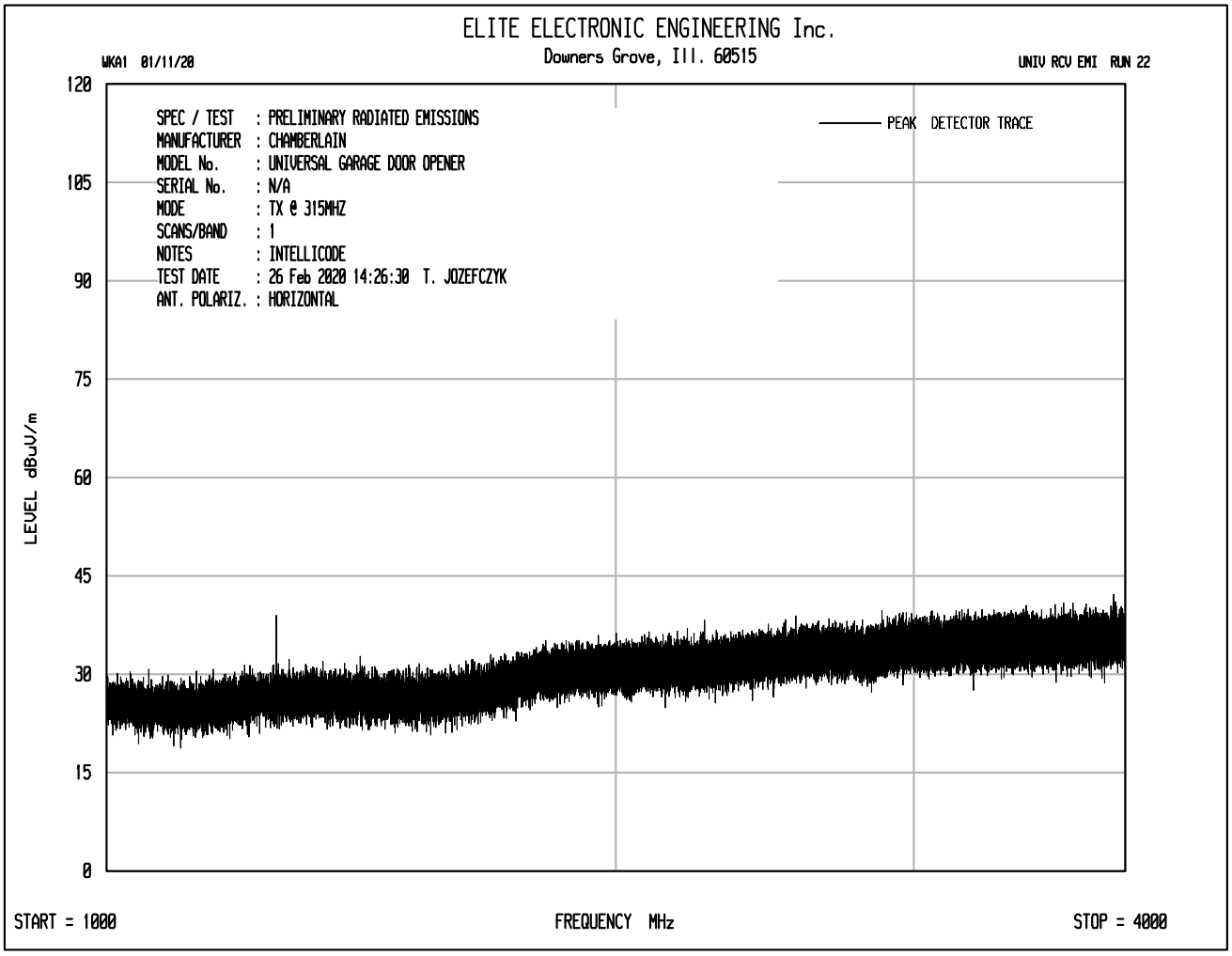

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 315MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 10:25:26 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

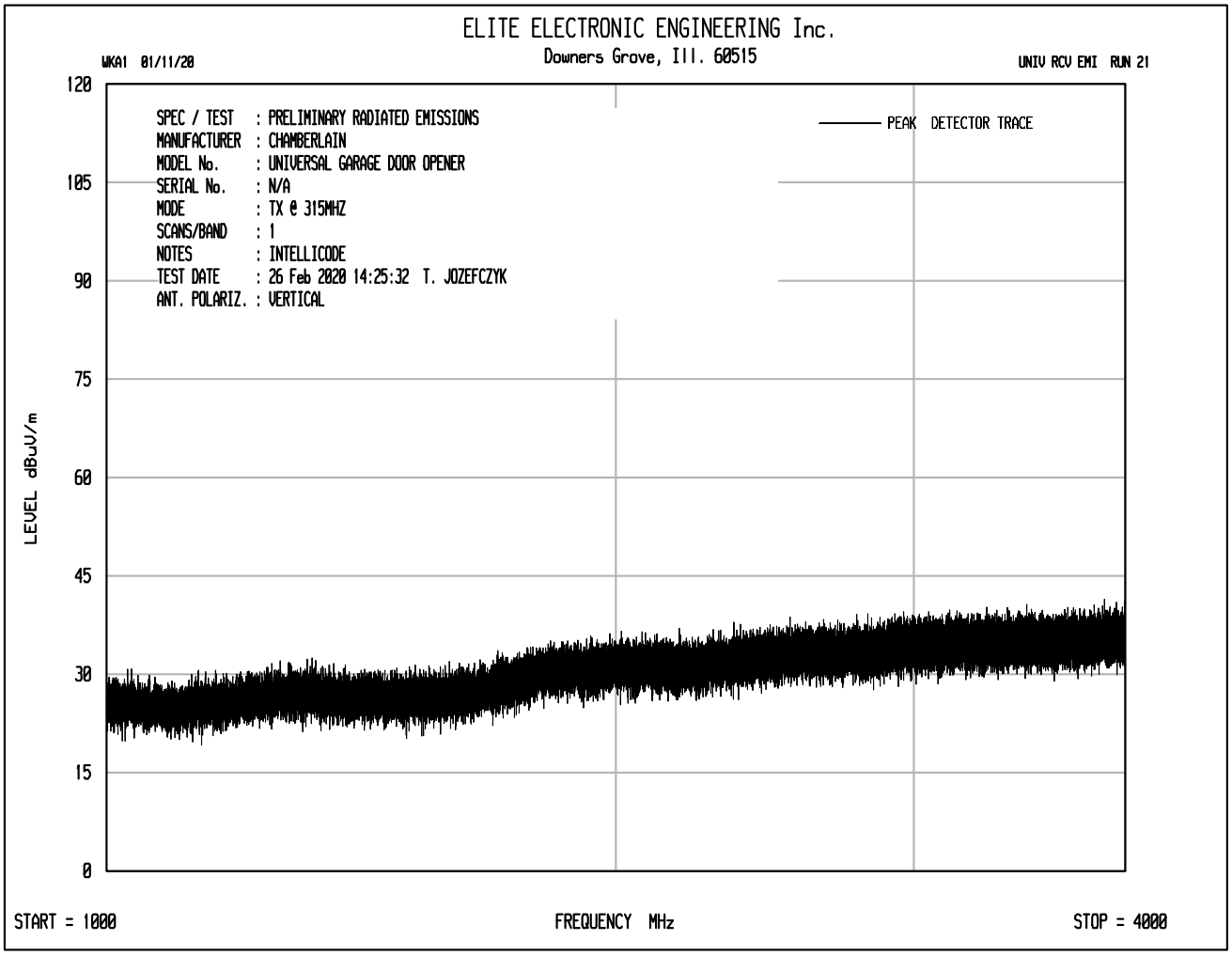

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 315MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 14:37:56 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

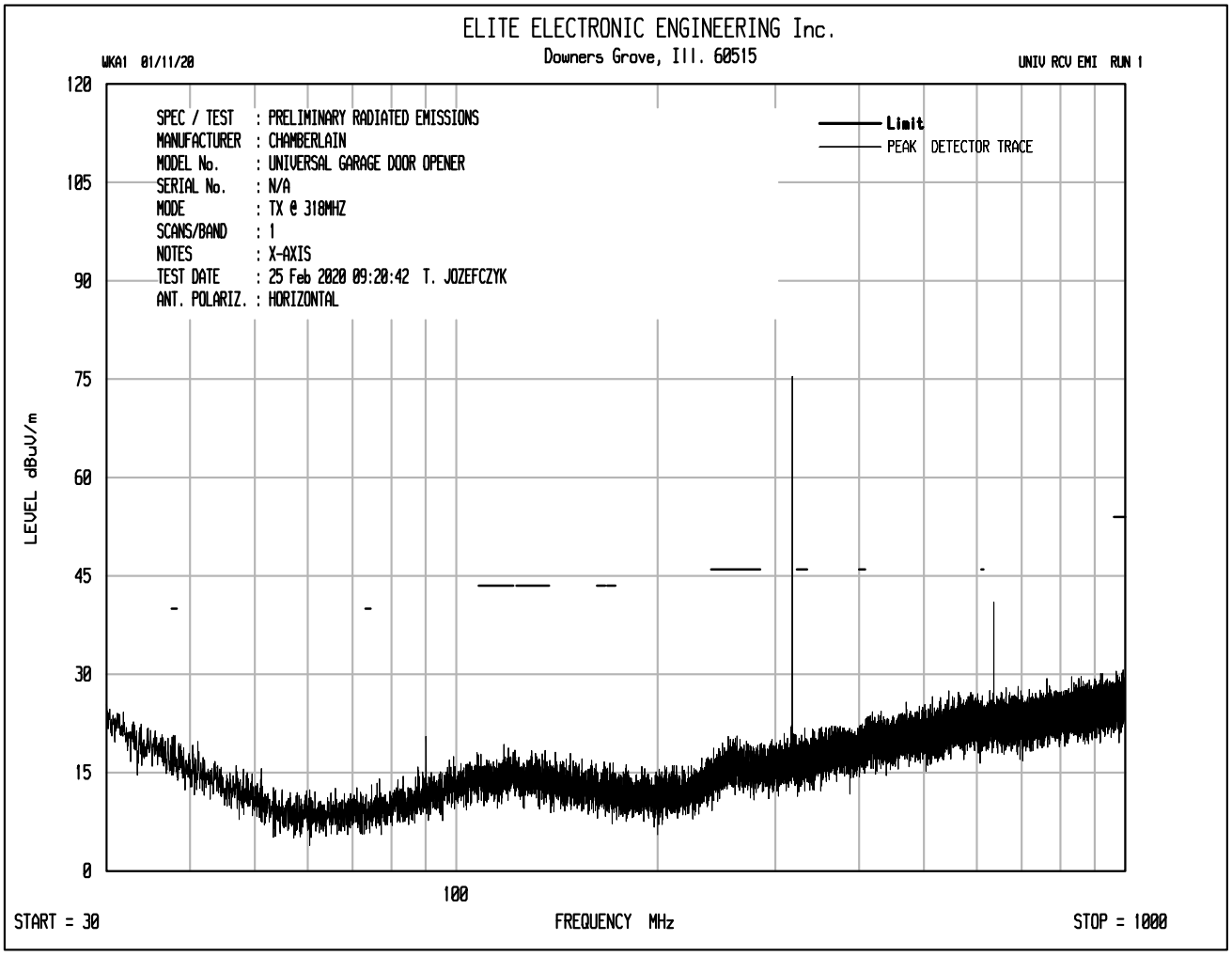

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 315MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 14:39:07 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

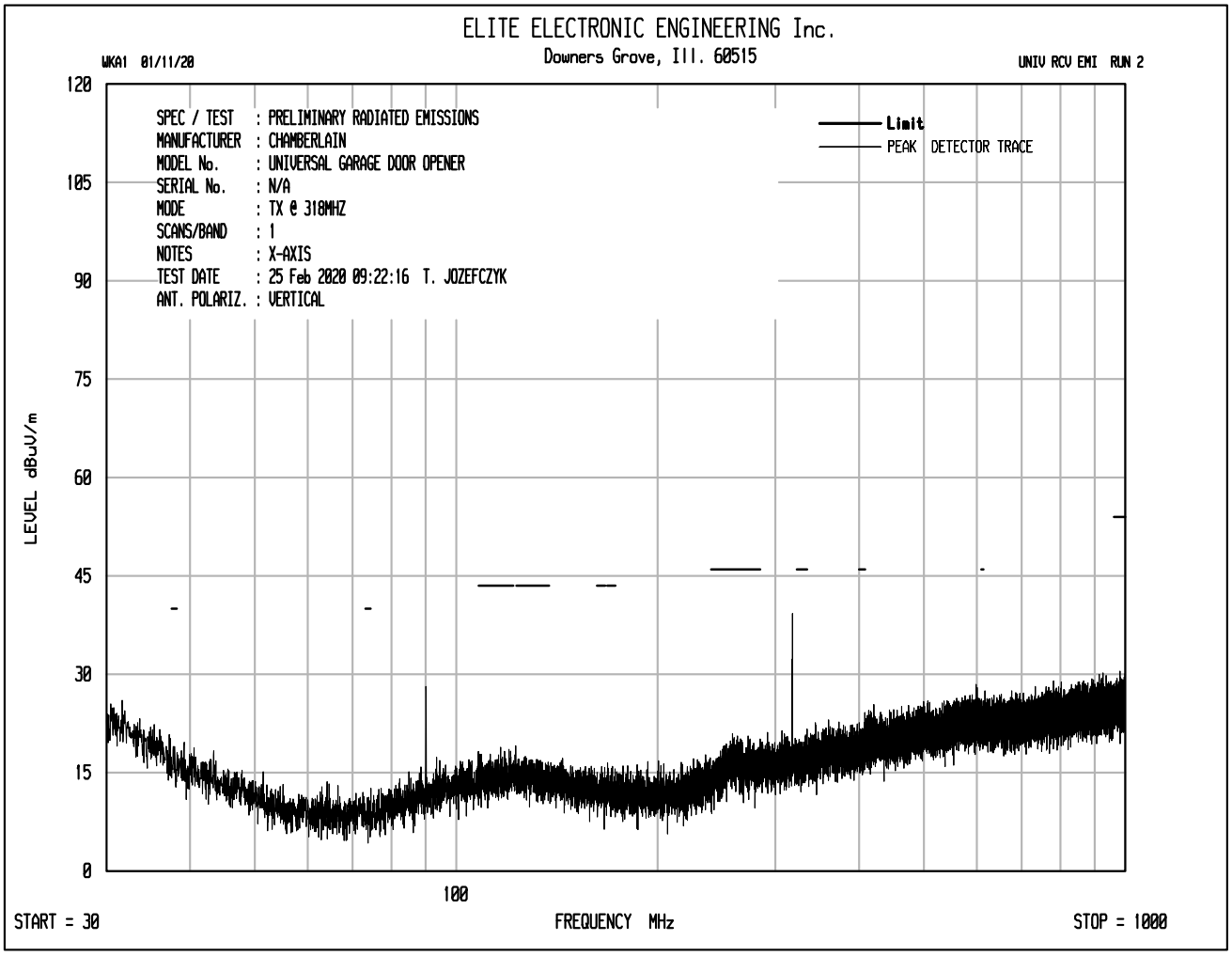

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 29
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 315MHZ
SCANS/BAND : 1
NOTES : INTELLICODE
TEST DATE : 27 Feb 2020 13:36:50 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

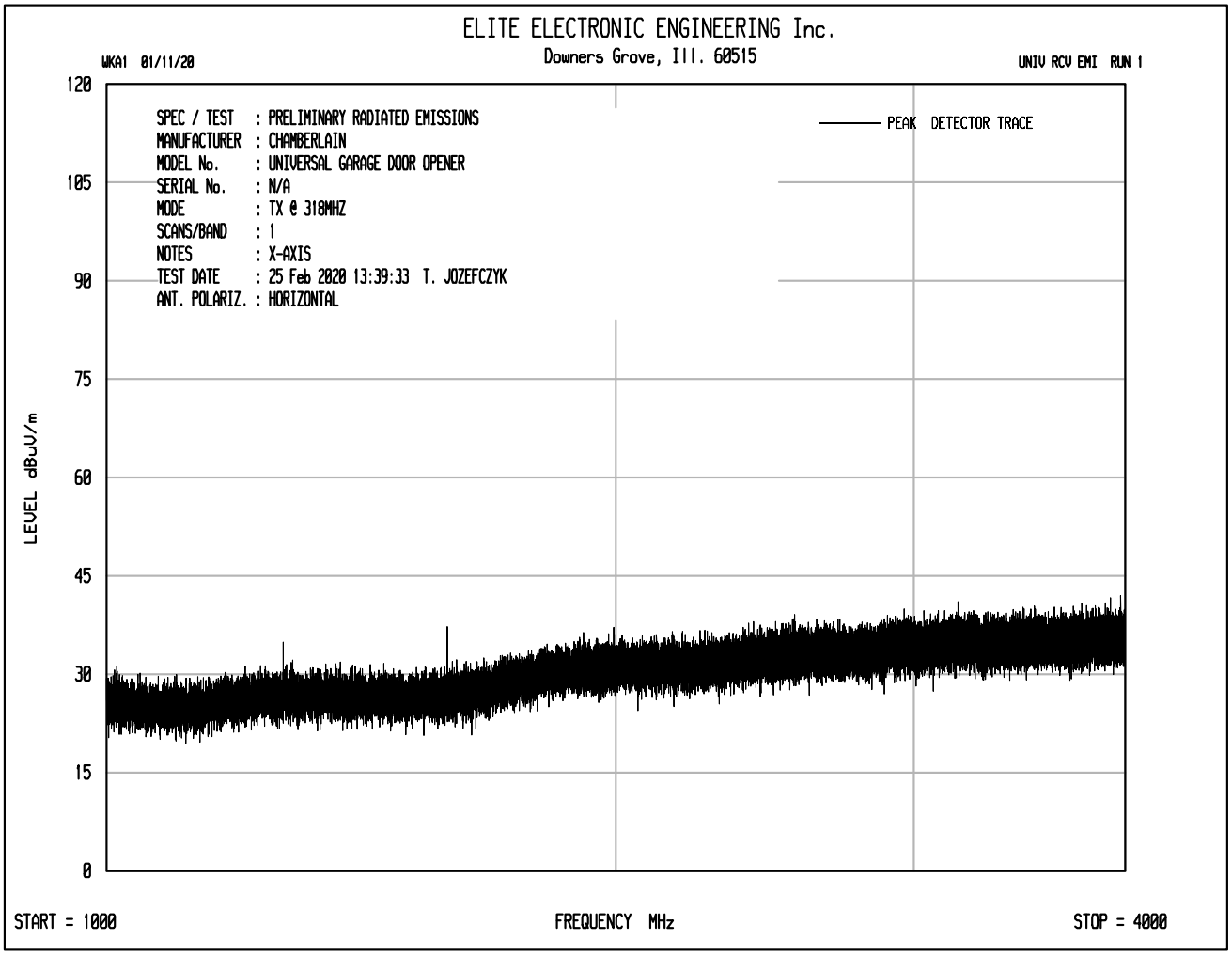

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 30
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 315MHZ
SCANS/BAND : 1
NOTES : INTELLICODE
TEST DATE : 27 Feb 2020 13:37:14 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

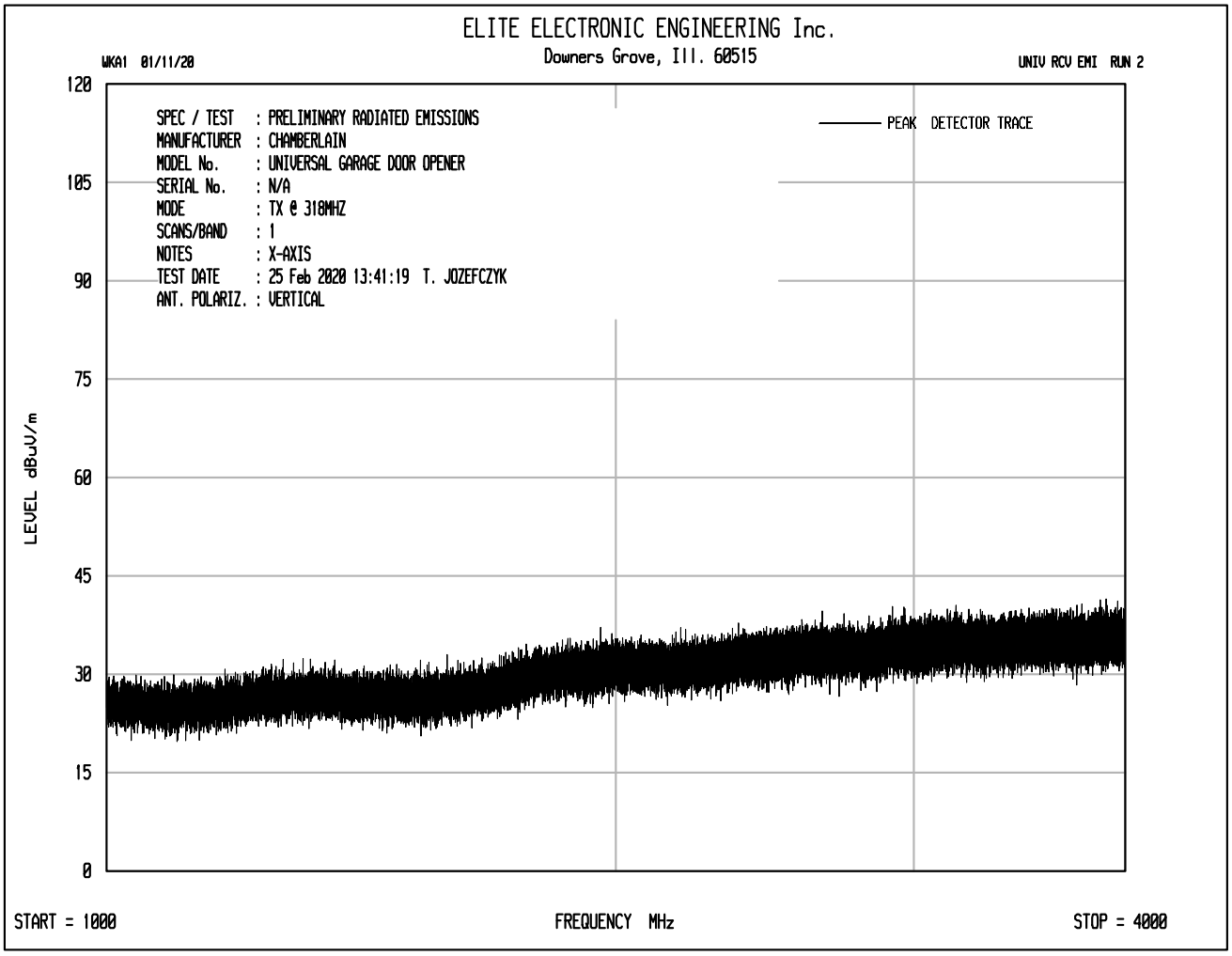

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 22
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 315MHZ
SCANS/BAND : 1
NOTES : INTELLICODE
TEST DATE : 26 Feb 2020 14:26:30 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

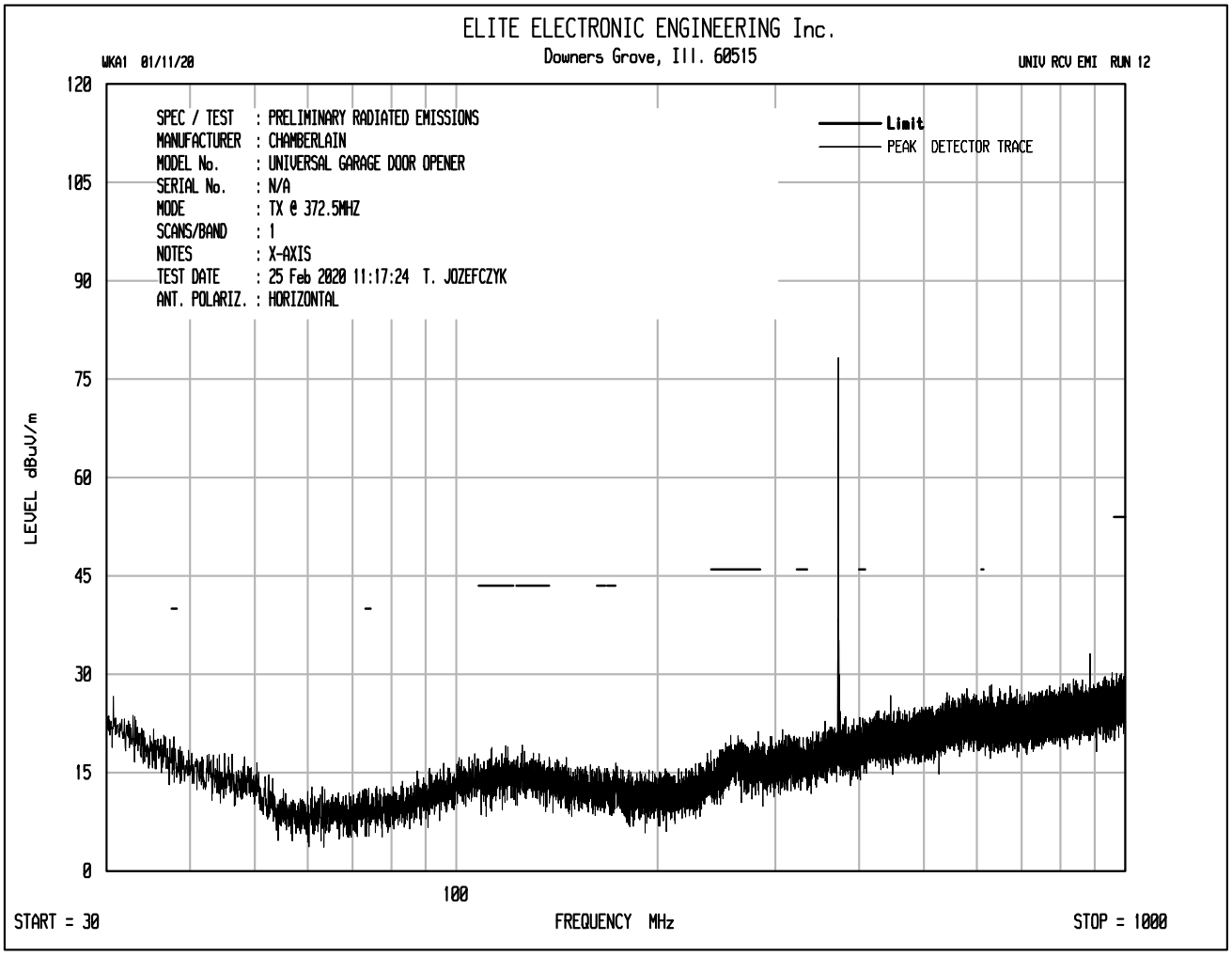

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 21
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 315MHZ
SCANS/BAND : 1
NOTES : INTELLICODE
TEST DATE : 26 Feb 2020 14:25:32 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

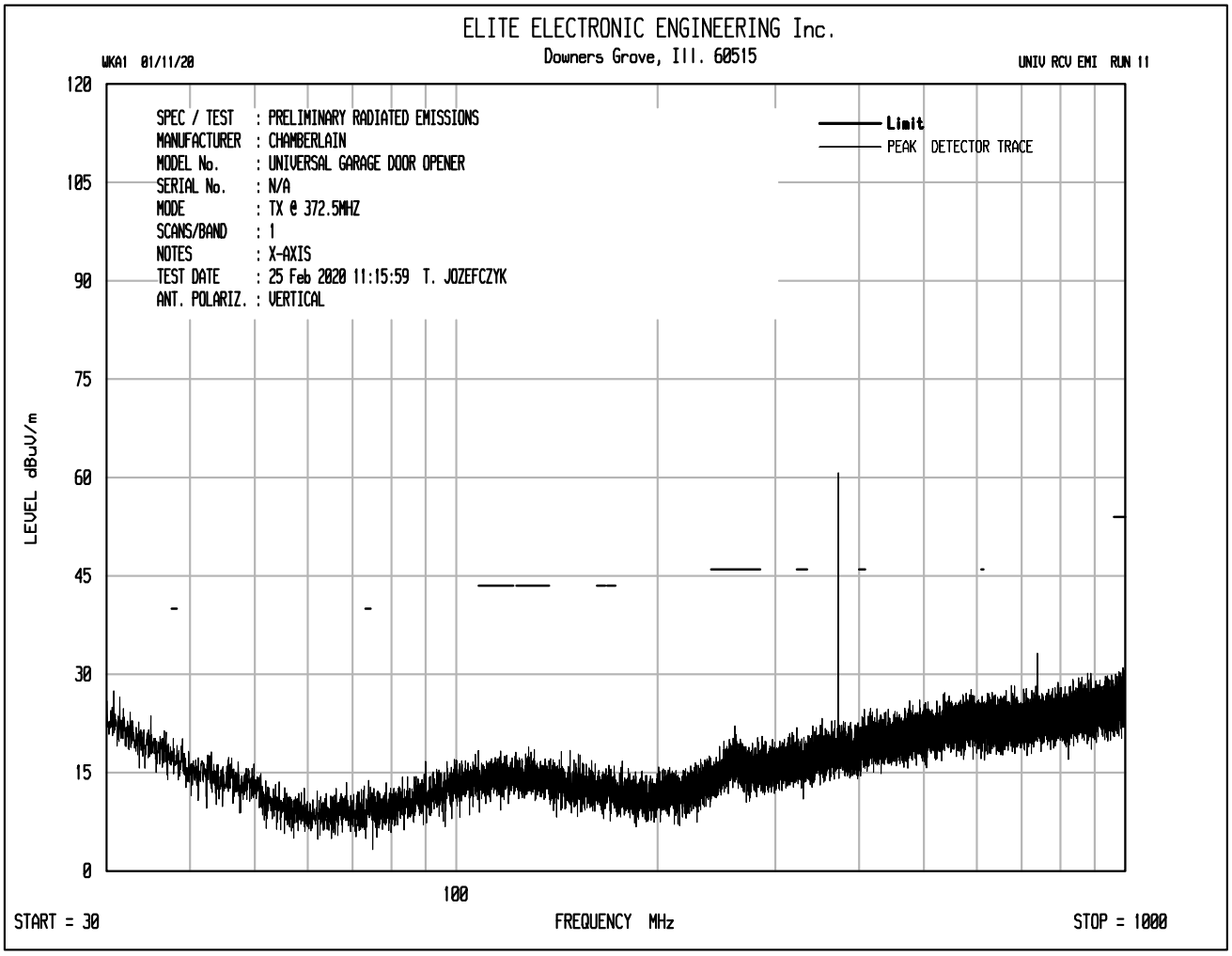

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 1
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 318MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 09:20:42 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

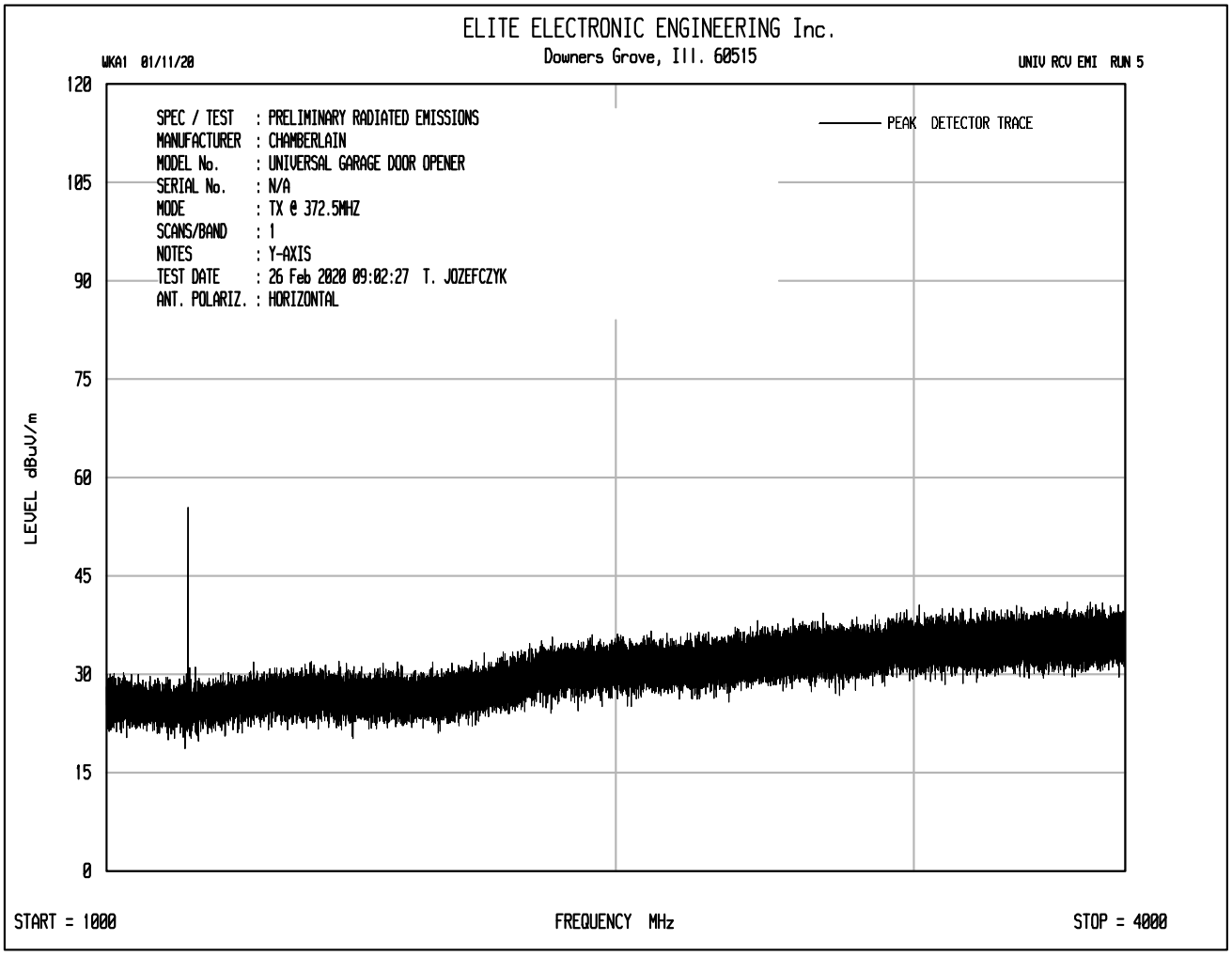

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 318MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 09:22:16 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

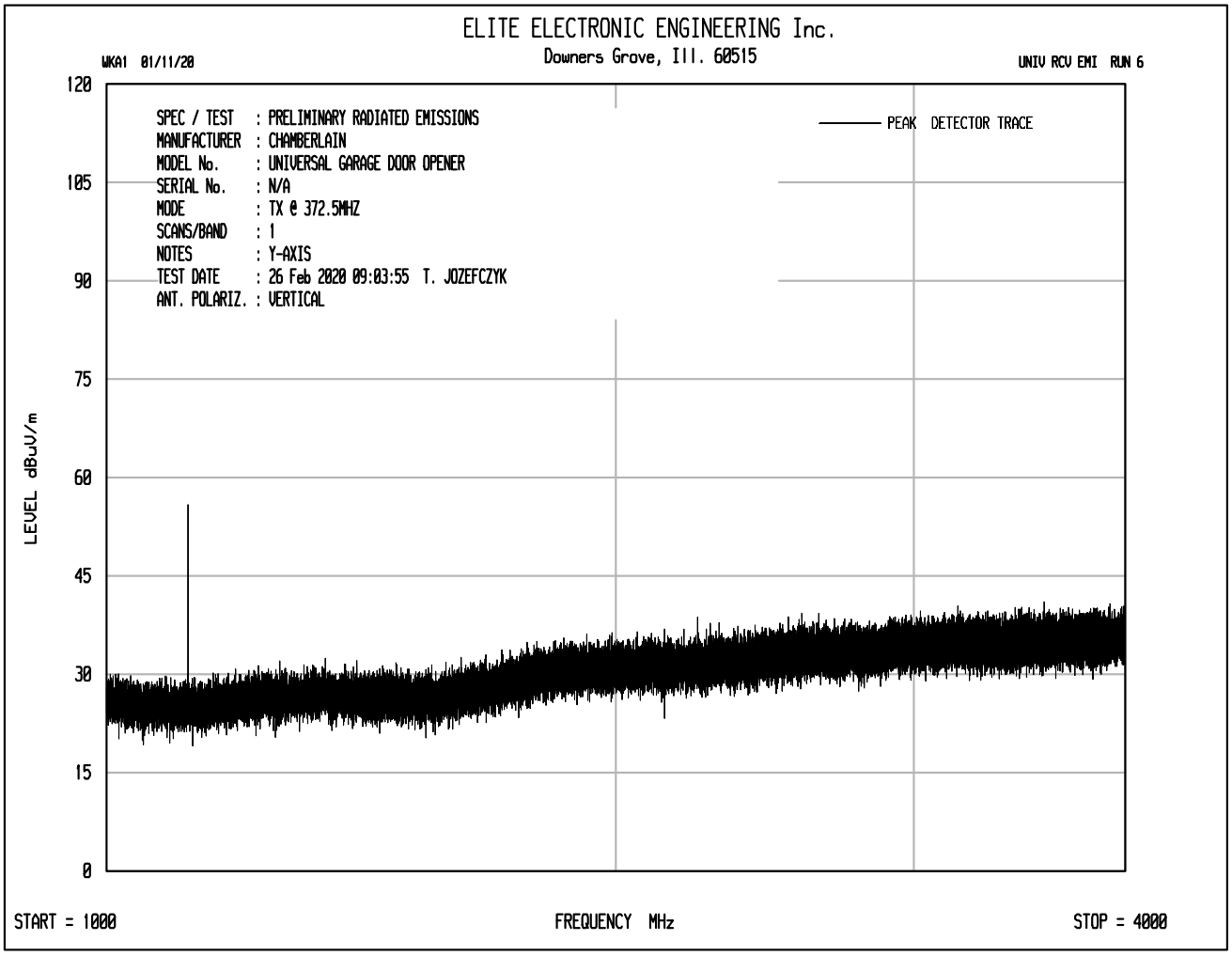

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 1
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 318MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 13:39:33 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

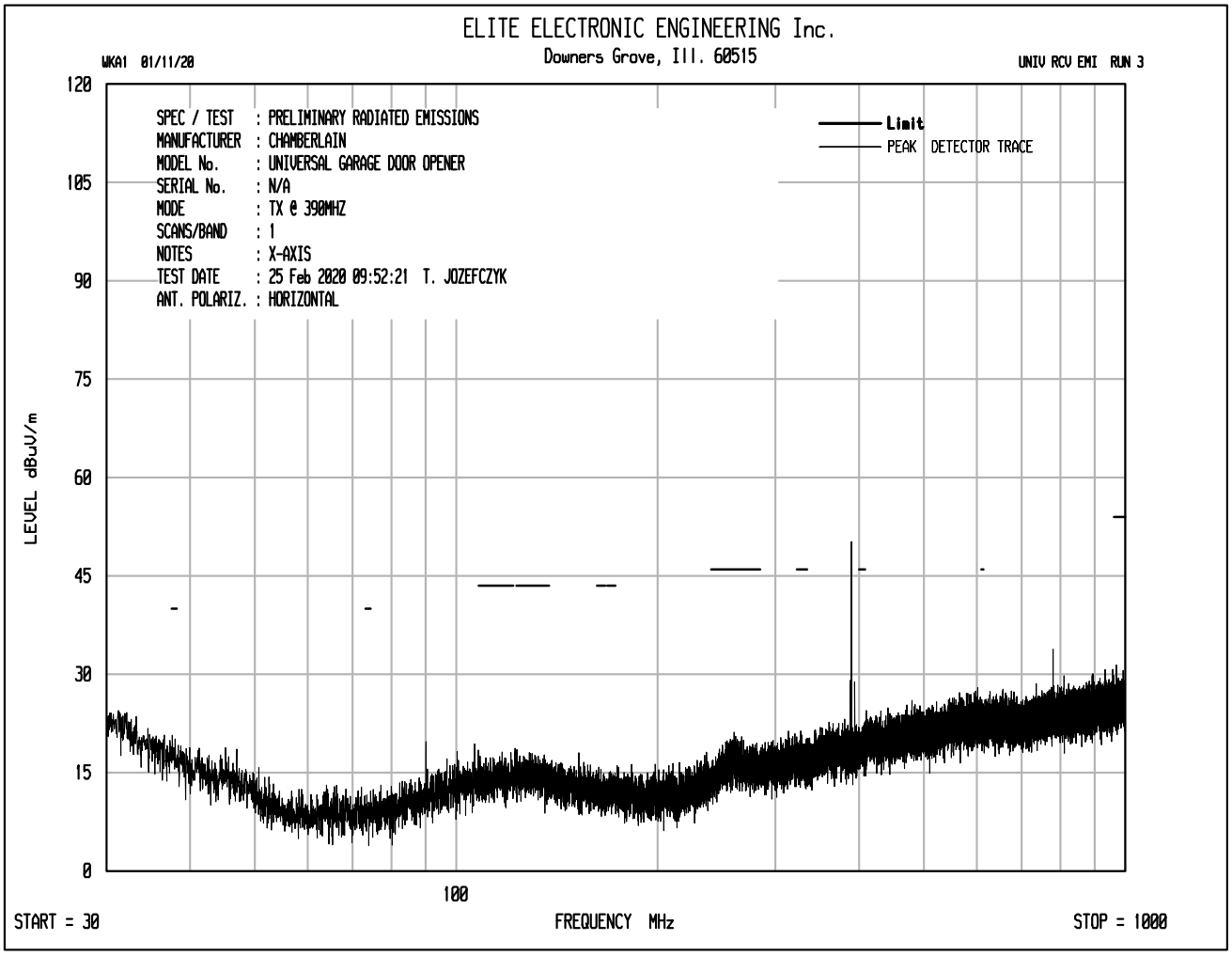

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 318MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 13:41:19 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

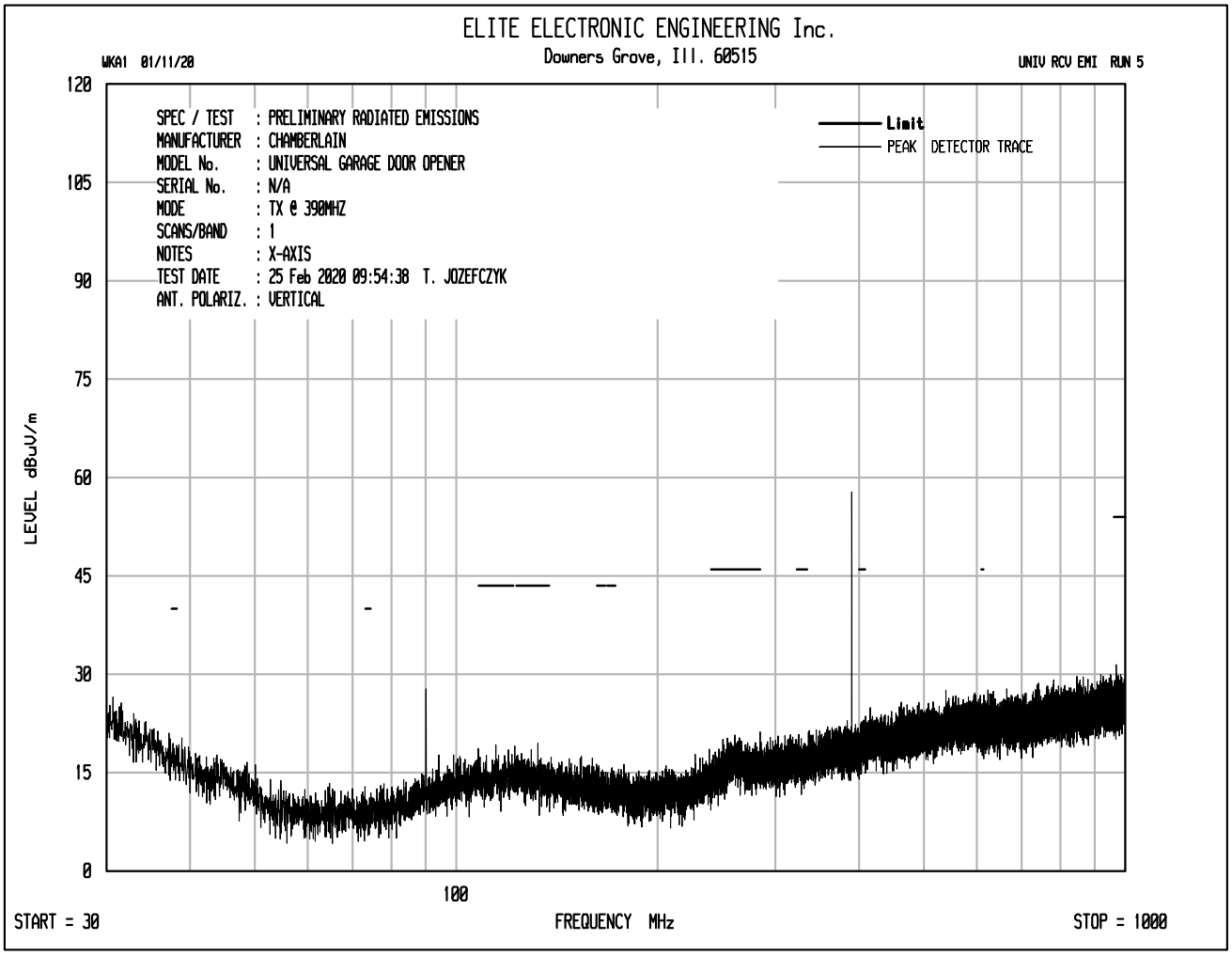

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 12
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 372.5MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 11:17:24 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

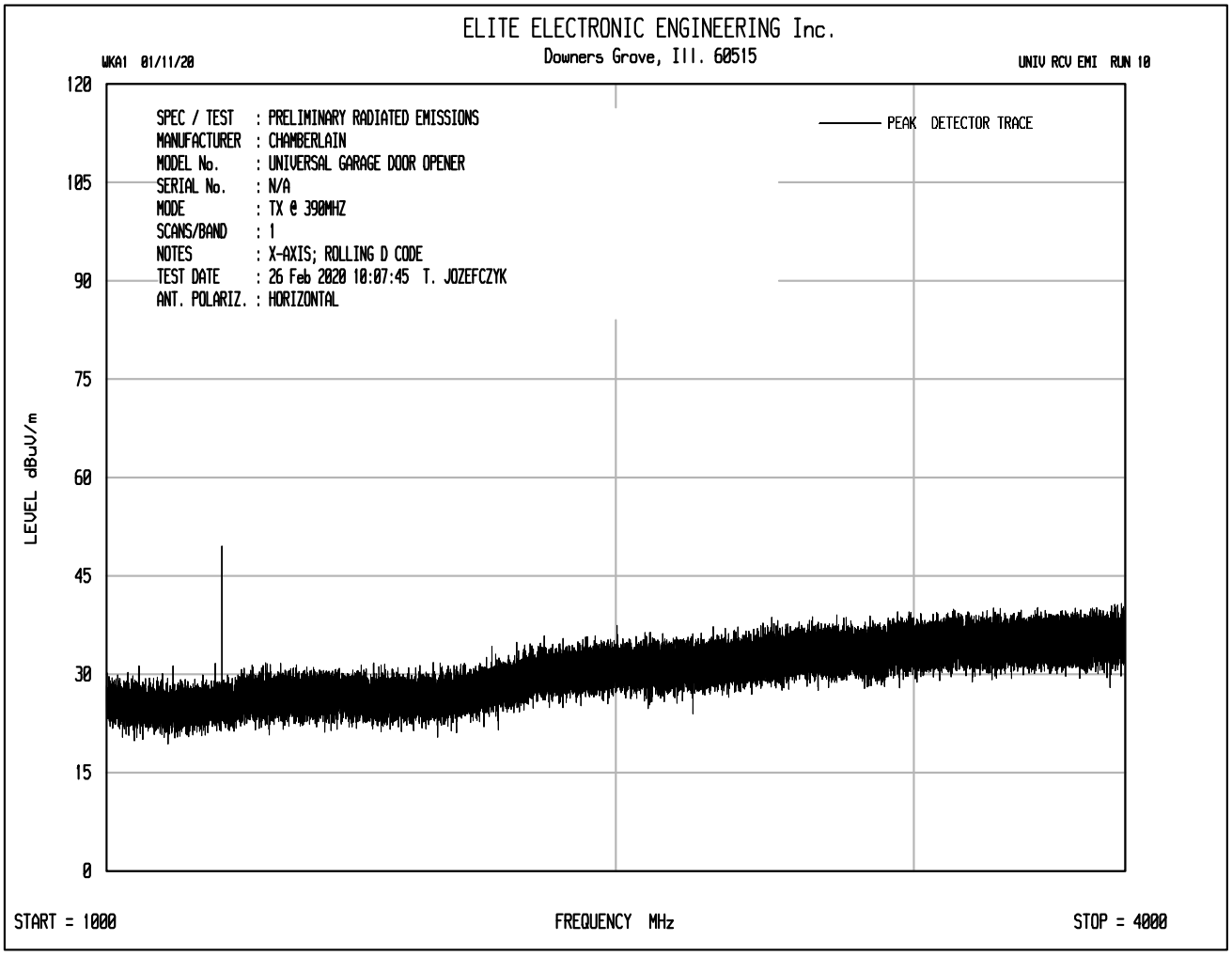

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 11
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 372.5MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 11:15:59 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

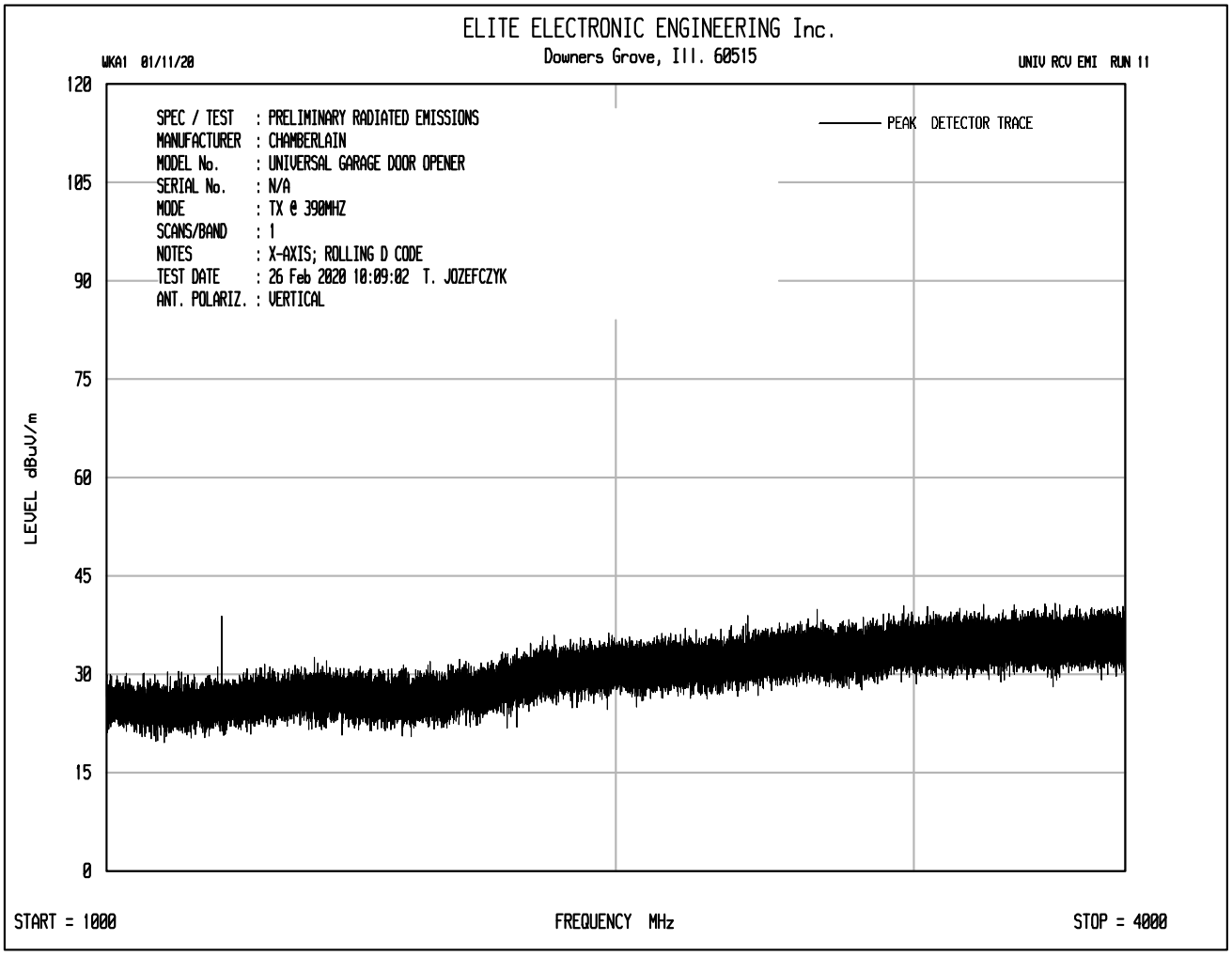

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 372.5MHZ
SCANS/BAND : 1
NOTES : Y-AXIS
TEST DATE : 26 Feb 2020 09:02:27 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

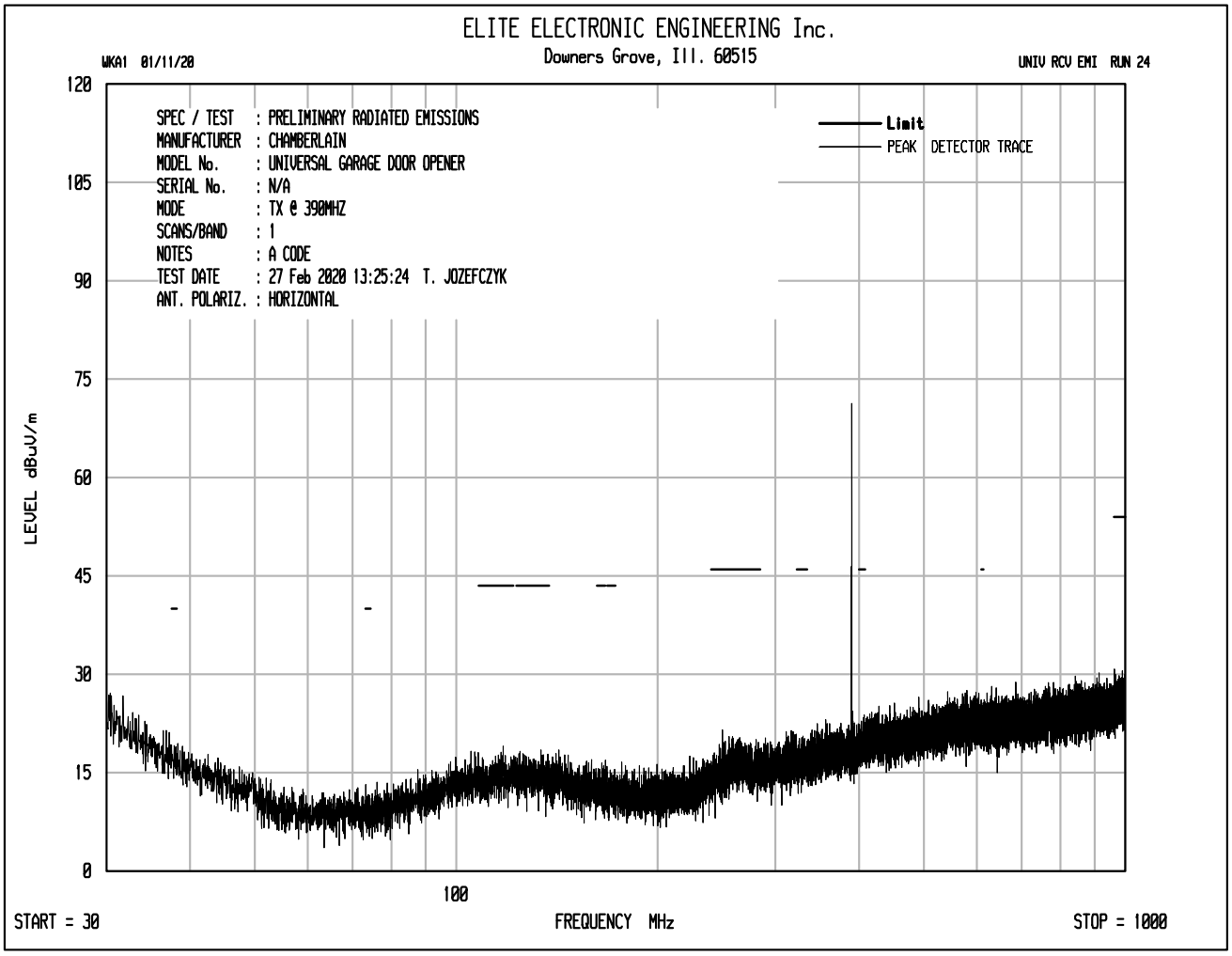

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 372.5MHZ
SCANS/BAND : 1
NOTES : Y-AXIS
TEST DATE : 26 Feb 2020 09:03:55 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

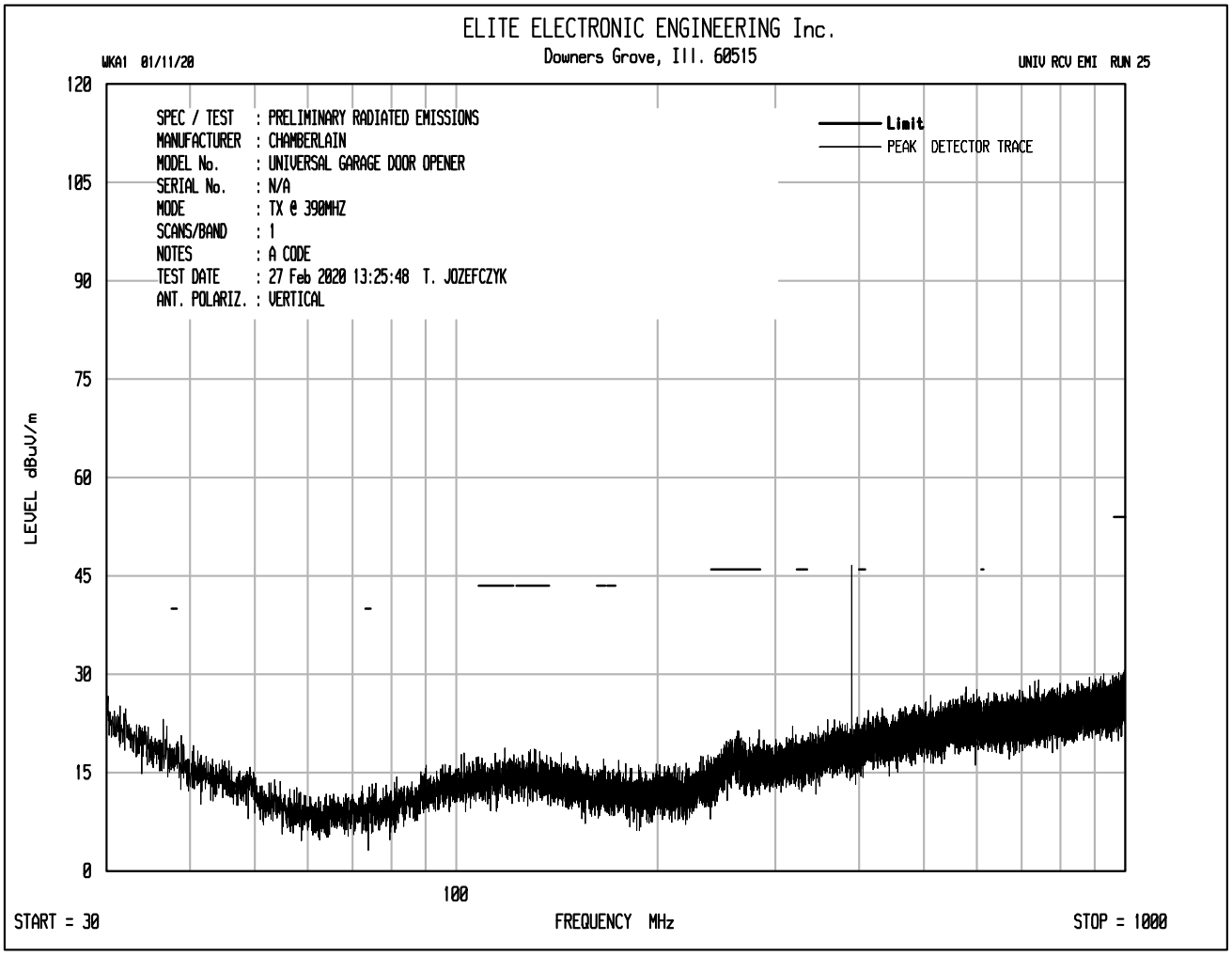

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 09:52:21 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

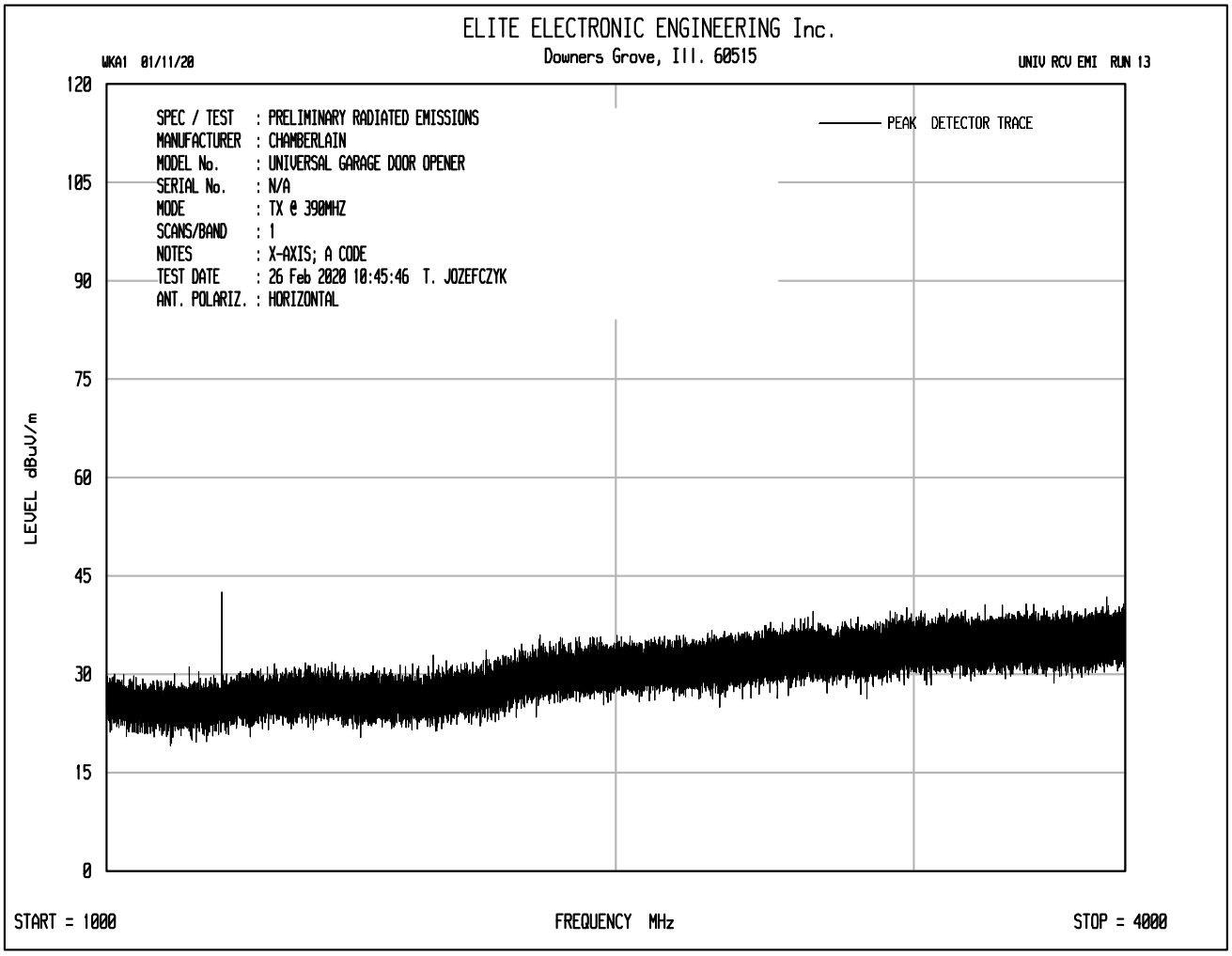

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : X-AXIS
TEST DATE : 25 Feb 2020 09:54:38 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

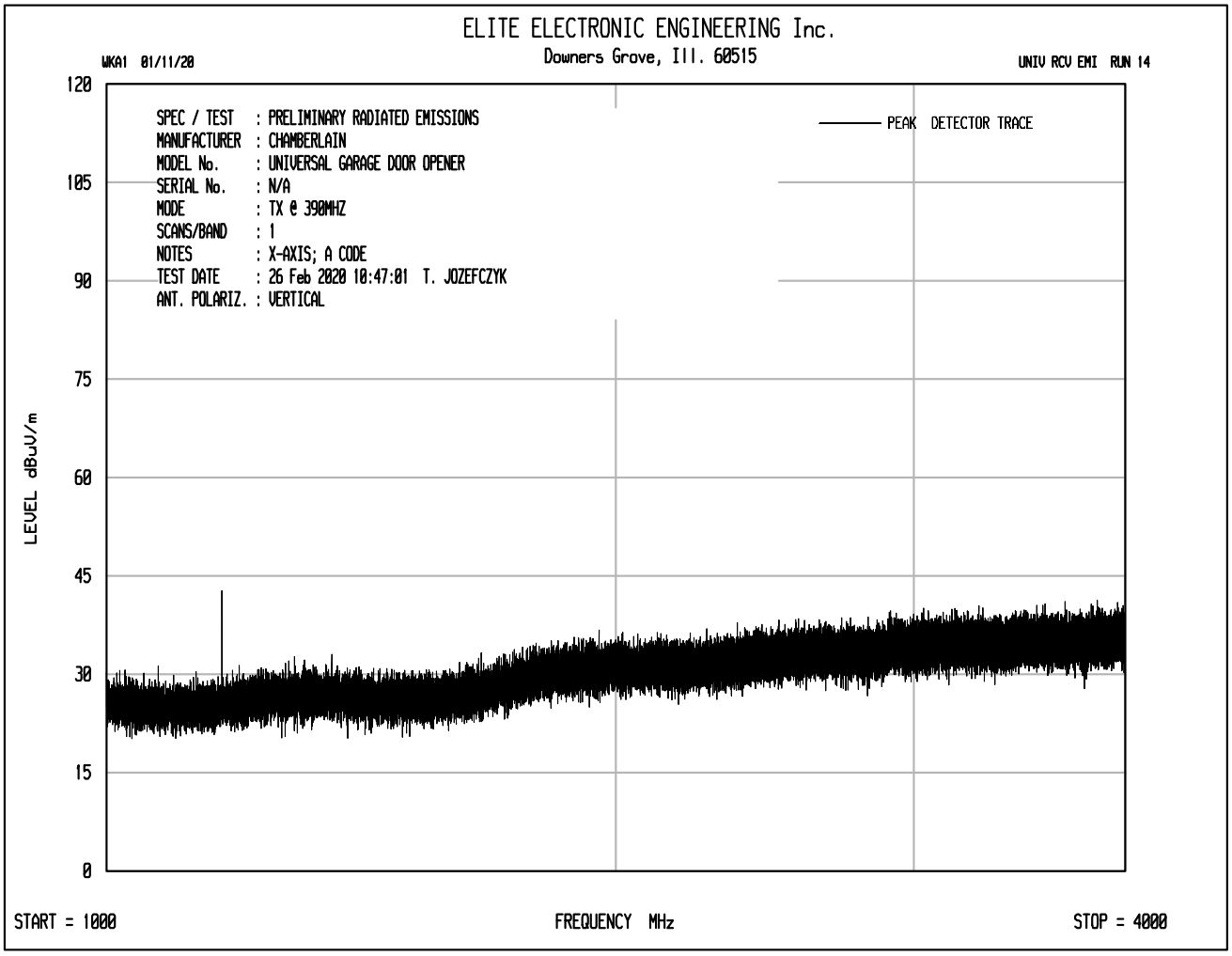

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 10
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : X-AXIS; ROLLING D CODE
TEST DATE : 26 Feb 2020 10:07:45 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

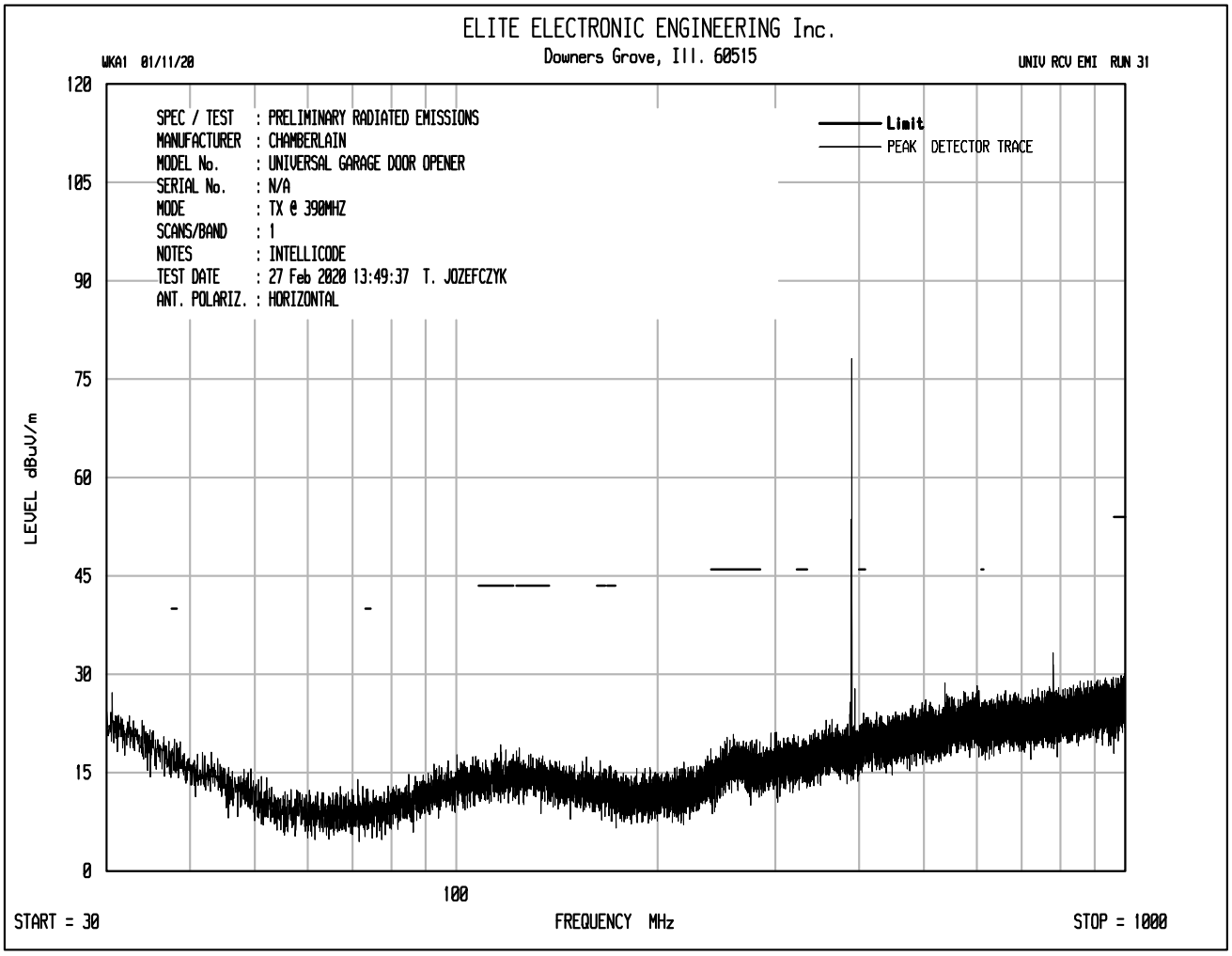

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 11
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : X-AXIS; ROLLING D CODE
TEST DATE : 26 Feb 2020 10:09:02 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

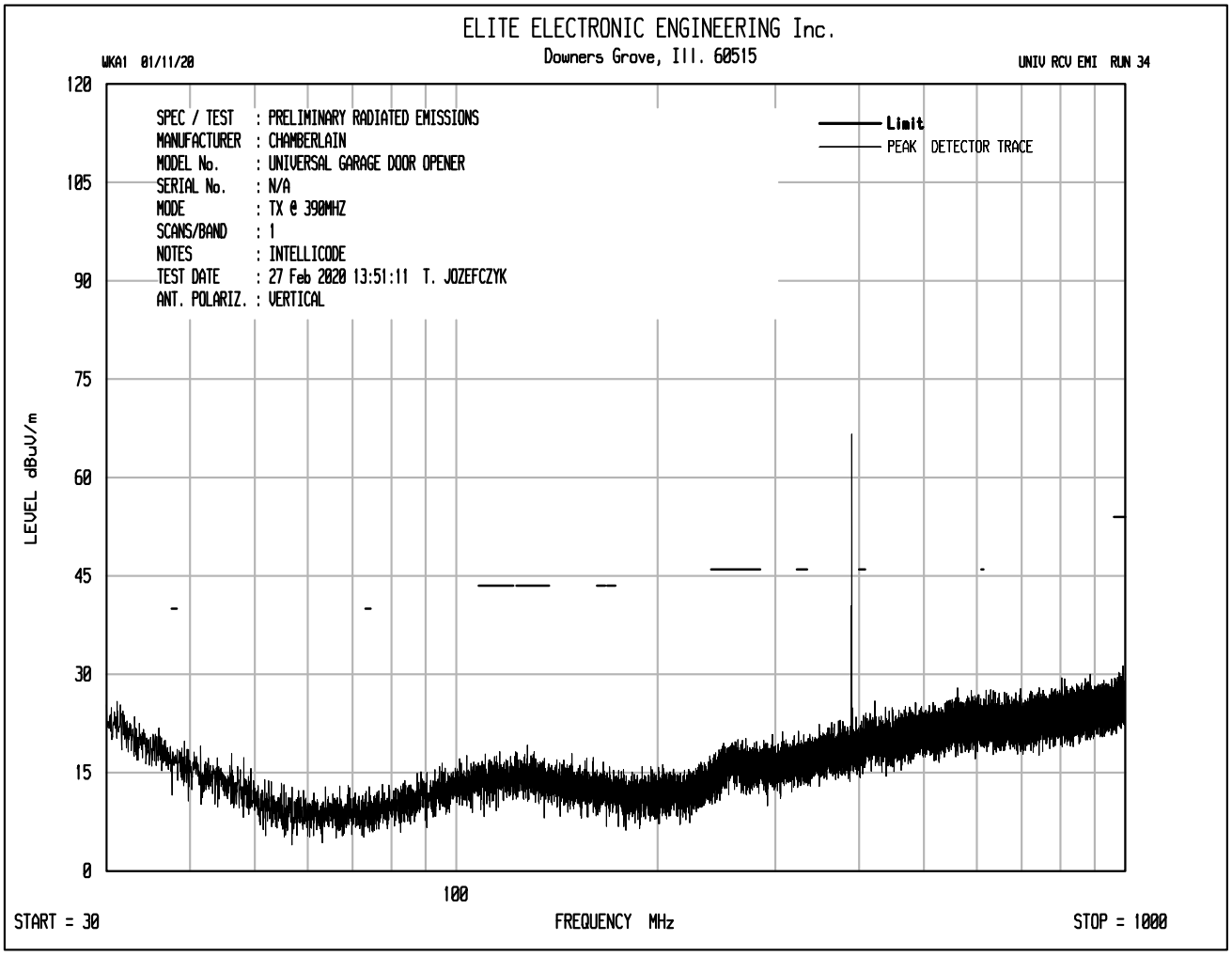

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 24
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : A CODE
TEST DATE : 27 Feb 2020 13:25:24 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

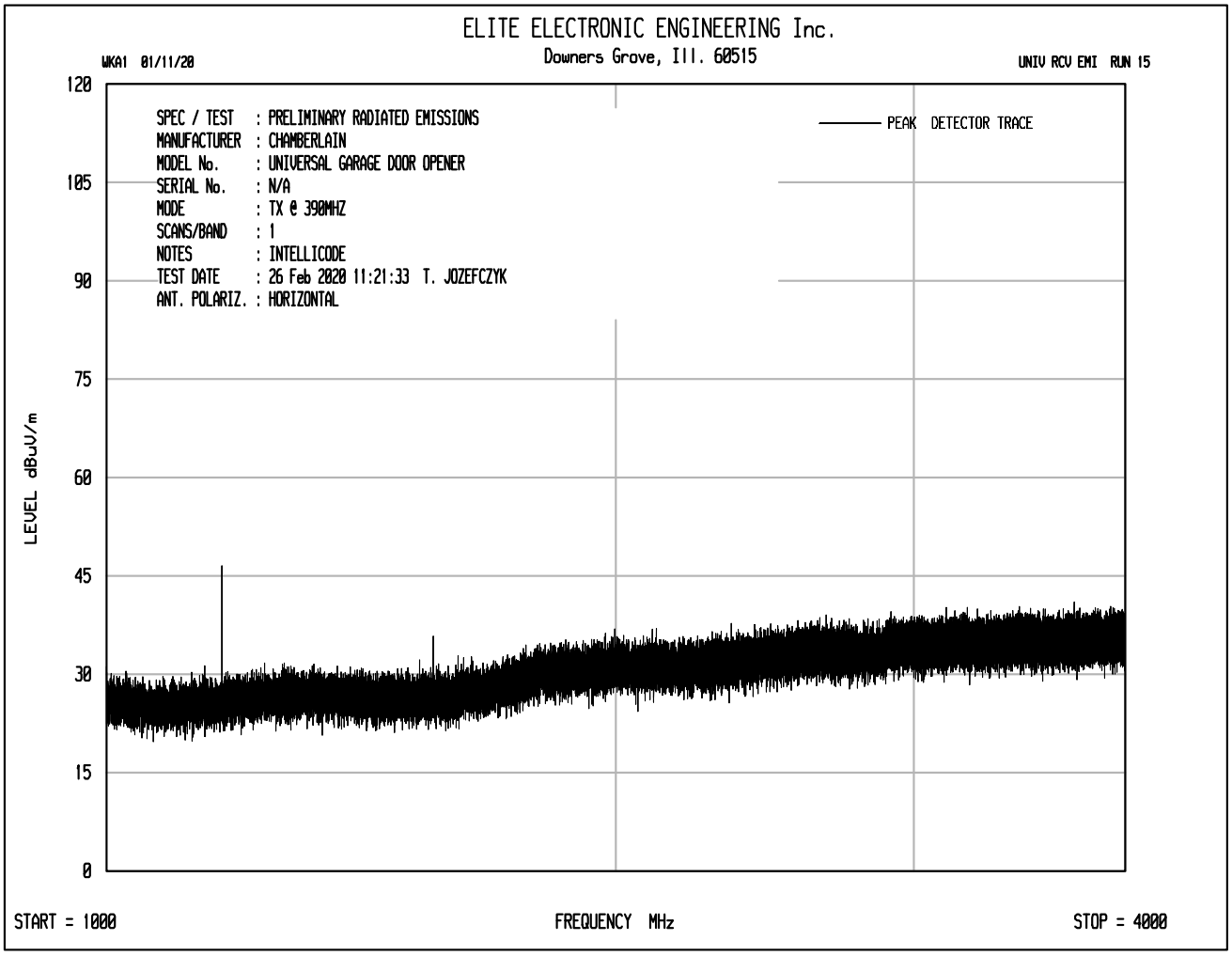

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 25
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : A CODE
TEST DATE : 27 Feb 2020 13:25:48 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

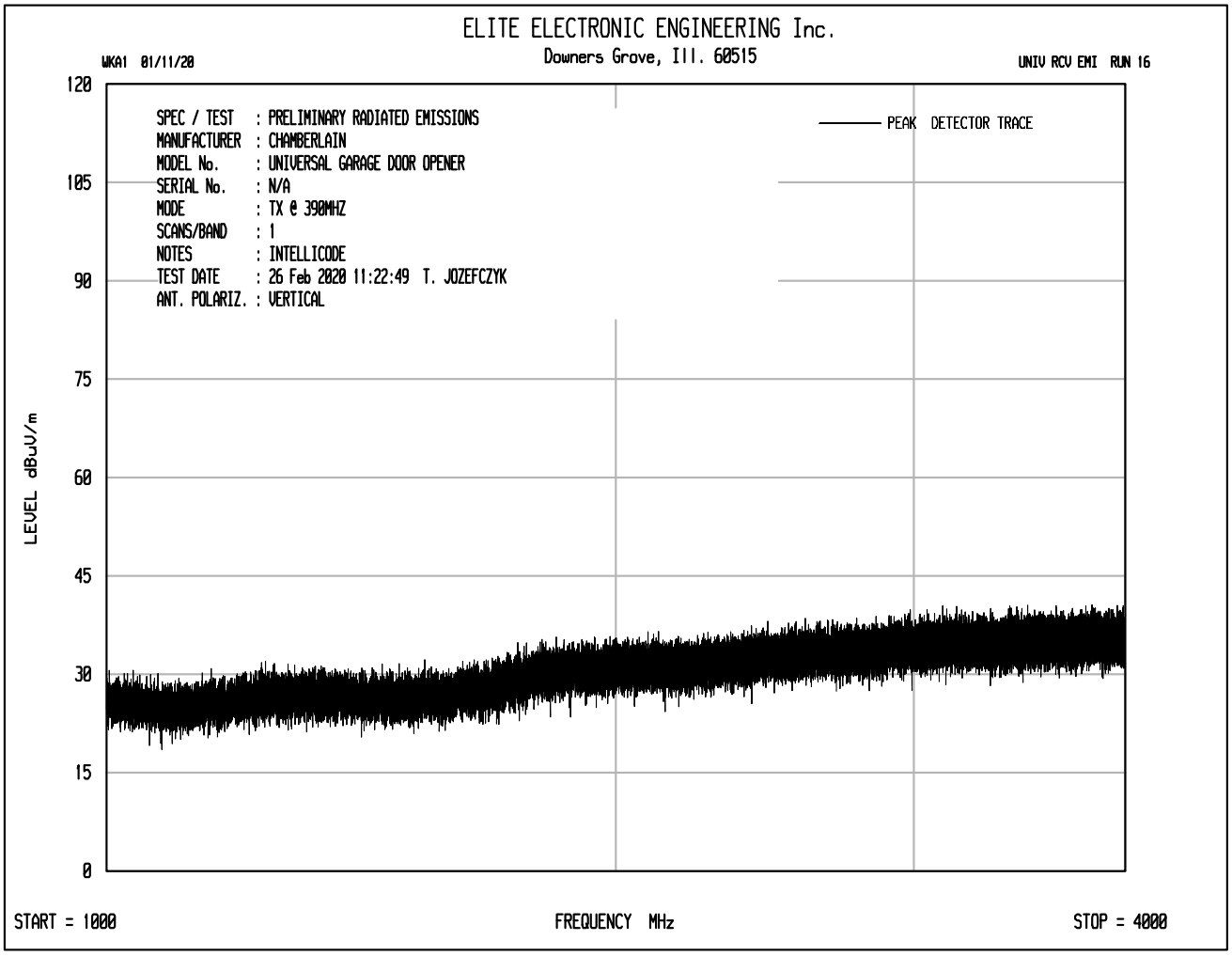

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 13
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : X-AXIS; A CODE
TEST DATE : 26 Feb 2020 10:45:46 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 14
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : X-AXIS; A CODE
TEST DATE : 26 Feb 2020 10:47:01 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 31
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : INTELLICODE
TEST DATE : 27 Feb 2020 13:49:37 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 34
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : INTELLICODE
TEST DATE : 27 Feb 2020 13:51:11 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 15
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : INTELLICODE
TEST DATE : 26 Feb 2020 11:21:33 T. JOZEFCZYK
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 01/11/20
UNIV RCV EMI RUN 16
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : UNIVERSAL GARAGE DOOR OPENER
SERIAL No. : N/A
MODE : TX @ 390MHZ
SCANS/BAND : 1
NOTES : INTELLICODE
TEST DATE : 26 Feb 2020 11:22:49 T. JOZEFCZYK
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4000

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 303MHz (Guardian Fix Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -11.94dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
303.00	H	54.81		1.79	19.48	0.00	-11.94	64.13	1609.40	5541.67	-10.74
303.00	V	60.66		1.79	19.48	0.00	-11.94	69.98	3156.20	5541.67	-4.89
606.00	H	22.42		2.46	24.85	0.00	-11.94	37.79	77.56	554.17	-17.08
606.00	V	15.57		2.46	24.85	0.00	-11.94	30.94	35.25	554.17	-23.93
909.00	H	27.14		2.89	26.69	0.00	-11.94	44.78	173.37	554.17	-10.09
909.00	V	23.66		2.89	26.69	0.00	-11.94	41.30	116.13	554.17	-13.57
1212.00	H	21.80	Ambient	3.05	28.66	0.00	-11.94	41.57	119.80	500.00	-12.41
1212.00	V	22.37	Ambient	3.05	28.66	0.00	-11.94	42.14	127.93	500.00	-11.84
1515.00	H	22.21		3.16	27.79	0.00	-11.94	41.22	115.09	500.00	-12.76
1515.00	V	22.50		3.16	27.79	0.00	-11.94	41.51	119.00	500.00	-12.47
1818.00	H	21.35	Ambient	3.25	30.63	0.00	-11.94	43.29	146.08	554.17	-11.58
1818.00	V	21.85	Ambient	3.25	30.63	0.00	-11.94	43.79	154.73	554.17	-11.08
2121.00	H	22.57	Ambient	3.32	31.45	0.00	-11.94	45.41	186.37	554.17	-9.47
2121.00	V	21.68	Ambient	3.32	31.45	0.00	-11.94	44.52	168.22	554.17	-10.36
2424.00	H	22.14	Ambient	3.39	32.30	0.00	-11.94	45.89	197.03	554.17	-8.98
2424.00	V	21.93	Ambient	3.39	32.30	0.00	-11.94	45.68	192.32	554.17	-9.19
2727.00	H	22.65	Ambient	3.71	32.52	0.00	-11.94	46.94	222.44	500.00	-7.04
2727.00	V	22.90	Ambient	3.71	32.52	0.00	-11.94	47.19	228.93	500.00	-6.79
3030.00	H	22.76	Ambient	4.18	32.68	0.00	-11.94	47.67	241.93	554.17	-7.20
3030.00	V	22.89	Ambient	4.18	32.68	0.00	-11.94	47.80	245.58	554.17	-7.07

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 310MHz (Secure Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -13.17dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
310.00	H	55.92		1.80	19.68	0.00	-13.17	64.23	1626.98	5833.33	-11.09
310.00	V	39.70		1.80	19.68	0.00	-13.17	48.01	251.41	5833.33	-27.31
620.00	H	19.46		2.49	24.99	0.00	-13.17	33.77	48.81	583.33	-21.55
620.00	V	14.68	Ambient	2.49	24.99	0.00	-13.17	28.99	28.15	583.33	-26.33
930.00	H	24.11		2.90	26.71	0.00	-13.17	40.55	106.59	583.33	-14.76
930.00	V	15.98		2.90	26.71	0.00	-13.17	32.42	41.81	583.33	-22.89
1240.00	H	20.92	Ambient	3.06	29.01	0.00	-13.17	39.82	97.91	500.00	-14.16
1240.00	V	20.88	Ambient	3.06	29.01	0.00	-13.17	39.78	97.46	500.00	-14.20
1550.00	H	21.54	Ambient	3.18	27.93	0.00	-13.17	39.47	94.12	500.00	-14.51
1550.00	V	21.64	Ambient	3.18	27.93	0.00	-13.17	39.57	95.21	500.00	-14.41
1860.00	H	21.67	Ambient	3.26	30.80	0.00	-13.17	42.56	134.23	583.33	-12.76
1860.00	V	21.80	Ambient	3.26	30.80	0.00	-13.17	42.69	136.25	583.33	-12.63
2170.00	H	21.75	Ambient	3.33	31.37	0.00	-13.17	43.29	146.04	583.33	-12.03
2170.00	V	22.14	Ambient	3.33	31.37	0.00	-13.17	43.68	152.75	583.33	-11.64
2480.00	H	22.27	Ambient	3.40	32.49	0.00	-13.17	44.99	177.62	583.33	-10.33
2480.00	V	22.97	Ambient	3.40	32.49	0.00	-13.17	45.69	192.53	583.33	-9.63
2790.00	H	22.58	Ambient	3.81	32.41	0.00	-13.17	45.64	191.32	500.00	-8.34
2790.00	V	22.58	Ambient	3.81	32.41	0.00	-13.17	45.64	191.32	500.00	-8.34
3100.00	H	22.95	Ambient	4.28	32.79	0.00	-13.17	46.85	220.10	583.33	-8.47
3100.00	V	22.99	Ambient	4.28	32.79	0.00	-13.17	46.89	221.11	583.33	-8.43

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 310MHz (Rolling Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -19.75dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
310.00	H	53.95		1.80	19.68	0.00	-19.75	55.68	607.97	5833.33	-19.64
310.00	V	41.93		1.80	19.68	0.00	-19.75	43.66	152.36	5833.33	-31.66
620.00	H	17.87		2.49	24.99	0.00	-19.75	25.60	19.06	583.33	-29.72
620.00	V	11.03		2.49	24.99	0.00	-19.75	18.76	8.67	583.33	-36.56
930.00	H	23.19		2.90	26.71	0.00	-19.75	33.05	44.95	583.33	-22.26
930.00	V	14.46		2.90	26.71	0.00	-19.75	24.32	16.45	583.33	-30.99
1240.00	H	22.11	Ambient	3.06	29.01	0.00	-19.75	34.43	52.64	500.00	-19.55
1240.00	V	21.52	Ambient	3.06	29.01	0.00	-19.75	33.84	49.18	500.00	-20.14
1550.00	H	21.72		3.18	27.93	0.00	-19.75	33.07	45.05	500.00	-20.91
1550.00	V	21.32		3.18	27.93	0.00	-19.75	32.67	43.02	500.00	-21.31
1860.00	H	21.75	Ambient	3.26	30.80	0.00	-19.75	36.06	63.51	583.33	-19.26
1860.00	V	21.40	Ambient	3.26	30.80	0.00	-19.75	35.71	61.00	583.33	-19.61
2170.00	H	21.79	Ambient	3.33	31.37	0.00	-19.75	36.75	68.78	583.33	-18.57
2170.00	V	21.47	Ambient	3.33	31.37	0.00	-19.75	36.43	66.29	583.33	-18.89
2480.00	H	22.05	Ambient	3.40	32.49	0.00	-19.75	38.19	81.19	583.33	-17.13
2480.00	V	22.24	Ambient	3.40	32.49	0.00	-19.75	38.38	82.99	583.33	-16.94
2790.00	H	22.87	Ambient	3.81	32.41	0.00	-19.75	39.35	92.74	500.00	-14.63
2790.00	V	22.97	Ambient	3.81	32.41	0.00	-19.75	39.45	93.81	500.00	-14.53
3100.00	H	23.16	Ambient	4.28	32.79	0.00	-19.75	40.48	105.71	583.33	-14.84
3100.00	V	23.24	Ambient	4.28	32.79	0.00	-19.75	40.56	106.69	583.33	-14.76

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 310MHz (E Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -16.41dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
310.00	H	64.63		1.80	19.68	0.00	-16.41	69.70	3054.10	5833.33	-5.62
310.00	V	50.60		1.80	19.68	0.00	-16.41	55.67	607.27	5833.33	-19.65
620.00	H	26.32		2.49	24.99	0.00	-16.41	37.39	74.05	583.33	-17.93
620.00	V	19.37		2.49	24.99	0.00	-16.41	30.44	33.27	583.33	-24.88
930.00	H	31.40		2.90	26.71	0.00	-16.41	44.60	169.92	583.33	-10.71
930.00	V	21.41		2.90	26.71	0.00	-16.41	34.61	53.79	583.33	-20.70
1240.00	H	21.72	Ambient	3.06	29.01	0.00	-16.41	37.38	73.93	500.00	-16.60
1240.00	V	21.08	Ambient	3.06	29.01	0.00	-16.41	36.74	68.68	500.00	-17.24
1550.00	H	25.00		3.18	27.93	0.00	-16.41	39.69	96.53	500.00	-14.29
1550.00	V	23.36		3.18	27.93	0.00	-16.41	38.05	79.93	500.00	-15.93
1860.00	H	21.58	Ambient	3.26	30.80	0.00	-16.41	39.23	91.48	583.33	-16.09
1860.00	V	21.59	Ambient	3.26	30.80	0.00	-16.41	39.24	91.59	583.33	-16.08
2170.00	H	22.46	Ambient	3.33	31.37	0.00	-16.41	40.76	109.14	583.33	-14.56
2170.00	V	21.75	Ambient	3.33	31.37	0.00	-16.41	40.05	100.57	583.33	-15.27
2480.00	H	22.02	Ambient	3.40	32.49	0.00	-16.41	41.50	118.85	583.33	-13.82
2480.00	V	22.26	Ambient	3.40	32.49	0.00	-16.41	41.74	122.18	583.33	-13.58
2790.00	H	22.72	Ambient	3.81	32.41	0.00	-16.41	42.54	133.89	500.00	-11.44
2790.00	V	22.92	Ambient	3.81	32.41	0.00	-16.41	42.74	137.01	500.00	-11.24
3100.00	H	23.07	Ambient	4.28	32.79	0.00	-16.41	43.73	153.68	583.33	-11.59
3100.00	V	22.94	Ambient	4.28	32.79	0.00	-16.41	43.60	151.40	583.33	-11.72

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 315MHz (D Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -11.44dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
315.00	H	59.38		1.81	19.71	0.00	-11.44	69.45	2969.71	6041.67	-6.17
315.00	V	42.82		1.81	19.71	0.00	-11.44	52.89	441.28	6041.67	-22.73
630.00	H	22.32		2.51	25.09	0.00	-11.44	38.49	84.03	604.17	-17.13
630.00	V	9.52		2.51	25.09	0.00	-11.44	25.69	19.25	604.17	-29.93
945.00	H	25.80		2.91	26.69	0.00	-11.44	43.96	157.80	604.17	-11.66
945.00	V	16.57		2.91	26.69	0.00	-11.44	34.73	54.52	604.17	-20.89
1260.00	H	22.08		3.07	29.11	0.00	-11.44	42.81	138.27	604.17	-12.81
1260.00	V	20.82	Ambient	3.07	29.11	0.00	-11.44	41.55	119.60	604.17	-14.07
1575.00	H	28.59		3.18	28.04	0.00	-11.44	48.38	262.29	500.00	-5.60
1575.00	V	26.59		3.18	28.04	0.00	-11.44	46.38	208.35	500.00	-7.60
1890.00	H	21.92	Ambient	3.27	31.15	0.00	-11.44	44.90	175.71	604.17	-10.73
1890.00	V	21.58	Ambient	3.27	31.15	0.00	-11.44	44.56	168.96	604.17	-11.07
2205.00	H	22.06	Ambient	3.34	31.45	0.00	-11.44	45.41	186.51	500.00	-8.57
2205.00	V	21.62	Ambient	3.34	31.45	0.00	-11.44	44.97	177.29	500.00	-9.01
2520.00	H	23.44	Ambient	3.41	32.60	0.00	-11.44	48.00	251.33	604.17	-7.62
2520.00	V	22.70	Ambient	3.41	32.60	0.00	-11.44	47.26	230.80	604.17	-8.36
2835.00	H	23.35	Ambient	3.88	32.46	0.00	-11.44	48.25	258.49	500.00	-5.73
2835.00	V	22.78	Ambient	3.88	32.46	0.00	-11.44	47.68	242.07	500.00	-6.30
3150.00	H	22.94	Ambient	4.35	32.80	0.00	-11.44	48.65	270.80	604.17	-6.97
3150.00	V	23.04	Ambient	4.35	32.80	0.00	-11.44	48.75	273.93	604.17	-6.87

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 315MHz (IntelliCode)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -13.68dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
315.00	H	61.36		1.81	19.71	0.00	-13.68	69.19	2882.13	6041.67	-6.43
315.00	V	48.22		1.81	19.71	0.00	-13.68	56.05	634.91	6041.67	-19.57
630.00	H	23.50		2.51	25.09	0.00	-13.68	37.43	74.38	604.17	-18.19
630.00	V	17.74		2.51	25.09	0.00	-13.68	31.67	38.32	604.17	-23.95
945.00	H	28.08		2.91	26.69	0.00	-13.68	44.00	158.52	604.17	-11.62
945.00	V	18.75		2.91	26.69	0.00	-13.68	34.67	54.15	604.17	-20.95
1260.00	H	21.93	Ambient	3.07	29.11	0.00	-13.68	40.42	105.01	604.17	-15.20
1260.00	V	21.32	Ambient	3.07	29.11	0.00	-13.68	39.81	97.89	604.17	-15.81
1575.00	H	27.85		3.18	28.04	0.00	-13.68	45.40	186.12	500.00	-8.58
1575.00	V	26.07		3.18	28.04	0.00	-13.68	43.62	151.63	500.00	-10.36
1890.00	H	22.63	Ambient	3.27	31.15	0.00	-13.68	43.37	147.33	604.17	-12.26
1890.00	V	21.94	Ambient	3.27	31.15	0.00	-13.68	42.68	136.08	604.17	-12.95
2205.00	H	22.08	Ambient	3.34	31.45	0.00	-13.68	43.19	144.44	500.00	-10.79
2205.00	V	21.46	Ambient	3.34	31.45	0.00	-13.68	42.57	134.49	500.00	-11.41
2520.00	H	22.40	Ambient	3.41	32.60	0.00	-13.68	44.72	172.28	604.17	-10.90
2520.00	V	22.54	Ambient	3.41	32.60	0.00	-13.68	44.86	175.08	604.17	-10.76
2835.00	H	23.30	Ambient	3.88	32.46	0.00	-13.68	45.96	198.58	500.00	-8.02
2835.00	V	22.92	Ambient	3.88	32.46	0.00	-13.68	45.58	190.08	500.00	-8.40
3150.00	H	23.25	Ambient	4.35	32.80	0.00	-13.68	46.72	216.84	604.17	-8.90
3150.00	V	23.14	Ambient	4.35	32.80	0.00	-13.68	46.61	214.12	604.17	-9.01

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 315MHz (E Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -15.62dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
315.00	H	64.81		1.81	19.71	0.00	-15.62	70.70	3429.36	6041.67	-4.92
315.00	V	51.71		1.81	19.71	0.00	-15.62	57.60	758.95	6041.67	-18.02
630.00	H	27.90		2.51	25.09	0.00	-15.62	39.89	98.73	604.17	-15.73
630.00	V	18.81		2.51	25.09	0.00	-15.62	30.80	34.67	604.17	-24.82
945.00	H	31.21		2.91	26.69	0.00	-15.62	45.19	181.80	604.17	-10.43
945.00	V	21.38		2.91	26.69	0.00	-15.62	35.36	58.63	604.17	-20.26
1260.00	H	23.00		3.07	29.11	0.00	-15.62	39.55	95.00	604.17	-16.07
1260.00	V	21.06	Ambient	3.07	29.11	0.00	-15.62	37.61	75.99	604.17	-18.01
1575.00	H	33.75		3.18	28.04	0.00	-15.62	49.36	293.62	500.00	-4.62
1575.00	V	30.93		3.18	28.04	0.00	-15.62	46.54	212.22	500.00	-7.44
1890.00	H	22.71		3.27	31.15	0.00	-15.62	41.51	118.93	604.17	-14.12
1890.00	V	21.33	Ambient	3.27	31.15	0.00	-15.62	40.13	101.46	604.17	-15.50
2205.00	H	21.83	Ambient	3.34	31.45	0.00	-15.62	41.00	112.25	500.00	-12.98
2205.00	V	21.66	Ambient	3.34	31.45	0.00	-15.62	40.83	110.08	500.00	-13.15
2520.00	H	23.17	Ambient	3.41	32.60	0.00	-15.62	43.55	150.57	604.17	-12.07
2520.00	V	22.28	Ambient	3.41	32.60	0.00	-15.62	42.66	135.91	604.17	-12.96
2835.00	H	23.06	Ambient	3.88	32.46	0.00	-15.62	43.78	154.51	500.00	-10.20
2835.00	V	23.23	Ambient	3.88	32.46	0.00	-15.62	43.95	157.56	500.00	-10.03
3150.00	H	23.65	Ambient	4.35	32.80	0.00	-15.62	45.18	181.61	604.17	-10.44
3150.00	V	23.11	Ambient	4.35	32.80	0.00	-15.62	44.64	170.67	604.17	-10.98

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 318MHz (Mega Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -14.98dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
318.00	H	56.02		1.81	19.76	0.00	-14.98	62.61	1350.96	6166.67	-13.19
318.00	V	56.71		1.81	19.76	0.00	-14.98	63.30	1462.66	6166.67	-12.50
636.00	H	19.95		2.53	25.04	0.00	-14.98	32.53	42.33	616.67	-23.27
636.00	V	12.40		2.53	25.04	0.00	-14.98	24.98	17.75	616.67	-30.82
954.00	H	24.44		2.91	26.87	0.00	-14.98	39.24	91.65	616.67	-16.56
954.00	V	23.61		2.91	26.87	0.00	-14.98	38.41	83.30	616.67	-17.39
1272.00	H	21.48	Ambient	3.07	29.08	0.00	-14.98	38.65	85.65	616.67	-17.15
1272.00	V	20.43	Ambient	3.07	29.08	0.00	-14.98	37.60	75.90	616.67	-18.20
1590.00	H	32.77		3.19	28.11	0.00	-14.98	49.09	284.71	500.00	-4.89
1590.00	V	31.75		3.19	28.11	0.00	-14.98	48.07	253.17	500.00	-5.91
1908.00	H	22.76		3.27	31.25	0.00	-14.98	42.30	130.34	616.67	-13.50
1908.00	V	21.83	Ambient	3.27	31.25	0.00	-14.98	41.37	117.11	616.67	-14.43
2226.00	H	21.72	Ambient	3.35	31.46	0.00	-14.98	41.54	119.44	500.00	-12.44
2226.00	V	20.82	Ambient	3.35	31.46	0.00	-14.98	40.64	107.68	500.00	-13.34
2544.00	H	22.47	Ambient	3.41	32.71	0.00	-14.98	43.61	151.57	616.67	-12.19
2544.00	V	22.60	Ambient	3.41	32.71	0.00	-14.98	43.74	153.86	616.67	-12.06
2862.00	H	22.90	Ambient	3.92	32.47	0.00	-14.98	44.32	164.38	500.00	-9.66
2862.00	V	23.05	Ambient	3.92	32.47	0.00	-14.98	44.47	167.25	500.00	-9.51
3180.00	H	23.34	Ambient	4.39	32.83	0.00	-14.98	45.59	190.26	616.67	-10.21
3180.00	V	23.01	Ambient	4.39	32.83	0.00	-14.98	45.26	183.17	616.67	-10.54

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 372.5MHz (Rolling Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -13.27dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
372.50	H	59.94		1.91	20.95	0.00	-13.27	69.53	2995.36	8437.50	-9.00
372.50	V	46.37		1.91	20.95	0.00	-13.27	55.96	627.98	8437.50	-22.57
745.00	H	17.60		2.74	25.71	0.00	-13.27	32.77	43.53	843.75	-25.75
745.00	V	13.30	Ambient	2.74	25.71	0.00	-13.27	28.47	26.53	843.75	-30.05
1117.50	H	34.27		3.00	27.79	0.00	-13.27	51.79	388.53	500.00	-2.19
1117.50	V	34.77		3.00	27.79	0.00	-13.27	52.29	411.56	500.00	-1.69
1490.00	H	23.14		3.16	27.81	0.00	-13.27	40.84	110.12	500.00	-13.14
1490.00	V	23.29	Ambient	3.16	27.81	0.00	-13.27	40.99	112.04	500.00	-12.99
1862.50	H	21.98	Ambient	3.26	30.82	0.00	-13.27	42.80	137.99	843.75	-15.73
1862.50	V	21.90	Ambient	3.26	30.82	0.00	-13.27	42.72	136.73	843.75	-15.81
2235.00	H	22.55	Ambient	3.35	31.46	0.00	-13.27	44.09	160.08	500.00	-9.89
2235.00	V	22.02	Ambient	3.35	31.46	0.00	-13.27	43.56	150.60	500.00	-10.42
2607.50	H	22.23	Ambient	3.51	32.59	0.00	-13.27	45.06	179.06	843.75	-13.46
2607.50	V	22.71	Ambient	3.51	32.59	0.00	-13.27	45.54	189.23	843.75	-12.98
2980.00	H	23.20	Ambient	4.10	32.59	0.00	-13.27	46.62	214.34	843.75	-11.90
2980.00	V	23.35	Ambient	4.10	32.59	0.00	-13.27	46.77	218.07	843.75	-11.75
3352.50	H	23.29	Ambient	4.63	32.85	0.00	-13.27	47.49	236.99	500.00	-6.48
3352.50	V	23.02	Ambient	4.63	32.85	0.00	-13.27	47.22	229.73	500.00	-6.75
3725.00	H	23.20	Ambient	4.77	32.97	0.00	-13.27	47.67	241.69	500.00	-6.31
3725.00	V	23.29	Ambient	4.77	32.97	0.00	-13.27	47.76	244.21	500.00	-6.22

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 390MHz (D Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -15.19dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
390.00	H	60.84		1.94	20.83	0.00	-15.19	68.42	2636.31	9166.67	-10.82
390.00	V	47.11		1.94	20.83	0.00	-15.19	54.69	542.62	9166.67	-24.55
780.00	H	20.49		2.80	26.04	0.00	-15.19	34.14	50.92	916.67	-25.11
780.00	V	14.18		2.80	26.04	0.00	-15.19	27.83	24.63	916.67	-31.42
1170.00	H	31.42		3.03	28.29	0.00	-15.19	47.54	238.33	500.00	-6.44
1170.00	V	27.61		3.03	28.29	0.00	-15.19	43.73	153.70	500.00	-10.25
1560.00	H	21.19	Ambient	3.18	27.97	0.00	-15.19	37.15	72.05	500.00	-16.83
1560.00	V	21.80	Ambient	3.18	27.97	0.00	-15.19	37.76	77.29	500.00	-16.22
1950.00	H	21.32	Ambient	3.28	31.17	0.00	-15.19	40.59	107.01	916.67	-18.66
1950.00	V	21.52	Ambient	3.28	31.17	0.00	-15.19	40.79	109.50	916.67	-18.46
2340.00	H	22.32	Ambient	3.37	31.87	0.00	-15.19	42.37	131.40	500.00	-11.61
2340.00	V	22.09	Ambient	3.37	31.87	0.00	-15.19	42.14	127.97	500.00	-11.84
2730.00	H	22.99	Ambient	3.71	32.53	0.00	-15.19	44.04	159.30	500.00	-9.94
2730.00	V	22.70	Ambient	3.71	32.53	0.00	-15.19	43.75	154.07	500.00	-10.23
3120.00	H	23.21	Ambient	4.31	32.80	0.00	-15.19	45.12	180.40	916.67	-14.12
3120.00	V	23.00	Ambient	4.31	32.80	0.00	-15.19	44.91	176.09	916.67	-14.33
3510.00	H	22.54	Ambient	4.76	32.91	0.00	-15.19	45.02	178.29	916.67	-14.22
3510.00	V	22.63	Ambient	4.76	32.91	0.00	-15.19	45.11	180.15	916.67	-14.13
3900.00	H	23.29	Ambient	4.78	33.24	0.00	-15.19	46.12	202.25	500.00	-7.86
3900.00	V	23.09	Ambient	4.78	33.24	0.00	-15.19	45.92	197.65	500.00	-8.06

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 390MHz (IntelliCode)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -14.17dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
390.00	H	62.30		1.94	20.83	0.00	-14.17	70.90	3507.49	9166.67	-8.34
390.00	V	49.59		1.94	20.83	0.00	-14.17	58.19	811.89	9166.67	-21.05
780.00	H	21.55		2.80	26.04	0.00	-14.17	36.22	64.70	916.67	-23.03
780.00	V	12.72		2.80	26.04	0.00	-14.17	27.39	23.41	916.67	-31.86
1170.00	H	33.32		3.03	28.29	0.00	-14.17	50.46	333.57	500.00	-3.52
1170.00	V	29.43		3.03	28.29	0.00	-14.17	46.57	213.15	500.00	-7.41
1560.00	H	22.41	Ambient	3.18	27.97	0.00	-14.17	39.39	93.25	500.00	-14.59
1560.00	V	20.64	Ambient	3.18	27.97	0.00	-14.17	37.62	76.06	500.00	-16.36
1950.00	H	21.68	Ambient	3.28	31.17	0.00	-14.17	41.97	125.43	916.67	-17.28
1950.00	V	21.55	Ambient	3.28	31.17	0.00	-14.17	41.84	123.57	916.67	-17.41
2340.00	H	21.87	Ambient	3.37	31.87	0.00	-14.17	42.94	140.32	500.00	-11.04
2340.00	V	22.06	Ambient	3.37	31.87	0.00	-14.17	43.13	143.42	500.00	-10.85
2730.00	H	22.60	Ambient	3.71	32.53	0.00	-14.17	44.67	171.28	500.00	-9.31
2730.00	V	23.25	Ambient	3.71	32.53	0.00	-14.17	45.32	184.59	500.00	-8.66
3120.00	H	23.09	Ambient	4.31	32.80	0.00	-14.17	46.02	200.10	916.67	-13.22
3120.00	V	23.07	Ambient	4.31	32.80	0.00	-14.17	46.00	199.64	916.67	-13.24
3510.00	H	22.41	Ambient	4.76	32.91	0.00	-14.17	45.91	197.53	916.67	-13.33
3510.00	V	22.87	Ambient	4.76	32.91	0.00	-14.17	46.37	208.27	916.67	-12.87
3900.00	H	23.71	Ambient	4.78	33.24	0.00	-14.17	47.56	238.72	500.00	-6.42
3900.00	V	23.27	Ambient	4.78	33.24	0.00	-14.17	47.12	226.93	500.00	-6.86

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 390MHz (A Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -12.82dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
390.00	H	56.03		1.94	20.83	0.00	-12.82	65.98	1990.66	9166.67	-13.26
390.00	V	43.70		1.94	20.83	0.00	-12.82	53.65	481.39	9166.67	-25.59
780.00	H	16.20		2.80	26.04	0.00	-12.82	32.22	40.82	916.67	-27.03
780.00	V	10.39	Ambient	2.80	26.04	0.00	-12.82	26.41	20.91	916.67	-32.84
1170.00	H	28.22		3.03	28.29	0.00	-12.82	46.71	216.61	500.00	-7.27
1170.00	V	24.33		3.03	28.29	0.00	-12.82	42.82	138.42	500.00	-11.16
1560.00	H	21.13	Ambient	3.18	27.97	0.00	-12.82	39.46	94.00	500.00	-14.52
1560.00	V	20.86	Ambient	3.18	27.97	0.00	-12.82	39.19	91.13	500.00	-14.79
1950.00	H	21.60	Ambient	3.28	31.17	0.00	-12.82	43.24	145.18	916.67	-16.01
1950.00	V	21.79	Ambient	3.28	31.17	0.00	-12.82	43.43	148.39	916.67	-15.82
2340.00	H	21.85	Ambient	3.37	31.87	0.00	-12.82	44.27	163.53	500.00	-9.71
2340.00	V	21.93	Ambient	3.37	31.87	0.00	-12.82	44.35	165.05	500.00	-9.63
2730.00	H	22.53	Ambient	3.71	32.53	0.00	-12.82	45.95	198.48	500.00	-8.03
2730.00	V	23.35	Ambient	3.71	32.53	0.00	-12.82	46.77	218.13	500.00	-7.21
3120.00	H	22.87	Ambient	4.31	32.80	0.00	-12.82	47.15	227.90	916.67	-12.09
3120.00	V	22.34	Ambient	4.31	32.80	0.00	-12.82	46.62	214.41	916.67	-12.62
3510.00	H	22.25	Ambient	4.76	32.91	0.00	-12.82	47.10	226.53	916.67	-12.14
3510.00	V	22.44	Ambient	4.76	32.91	0.00	-12.82	47.29	231.54	916.67	-11.95
3900.00	H	23.31	Ambient	4.78	33.24	0.00	-12.82	48.51	266.31	500.00	-5.47
3900.00	V	23.40	Ambient	4.78	33.24	0.00	-12.82	48.60	269.09	500.00	-5.38

DATA PAGE	
MANUFACTURER	Chamberlain Group, Inc.
EUT	Universal Garage Door Remote
MODEL NO.	001D7922-1
TEST	FCC §15.231, RSS-210 Radiated Spurious Emissions - Harmonics
MODE	Tx – 390MHz (E Code)
DATE TESTED	February 27, 2020
TEST PERFORMED BY	Tylar Jozefczyk
NOTES	Duty Cycle = -16.06dB

RADIATED SPURIOUS EMISSIONS

Freq. (MHz)	Ant. Pol.	Meter Reading (dBµV)	Ambient	CBL Fac. (dB)	Ant. Fac. (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total (dBµV/m)	Total (µV/m)	Limit (µV/m)	Margin (dB)
390.00	H	65.66		1.94	20.83	0.00	-16.06	72.37	4154.29	9166.67	-6.87
390.00	V	53.02		1.94	20.83	0.00	-16.06	59.73	969.39	9166.67	-19.51
780.00	H	22.00		2.80	26.04	0.00	-16.06	34.78	54.81	916.67	-24.47
780.00	V	16.81		2.80	26.04	0.00	-16.06	29.59	30.16	916.67	-29.66
1170.00	H	36.95		3.03	28.29	0.00	-16.06	52.20	407.56	500.00	-1.78
1170.00	V	31.86		3.03	28.29	0.00	-16.06	47.11	226.82	500.00	-6.87
1560.00	H	21.50	Ambient	3.18	27.97	0.00	-16.06	36.59	67.55	500.00	-17.39
1560.00	V	20.93	Ambient	3.18	27.97	0.00	-16.06	36.02	63.26	500.00	-17.96
1950.00	H	22.66	Ambient	3.28	31.17	0.00	-16.06	41.06	112.96	916.67	-18.19
1950.00	V	21.65	Ambient	3.28	31.17	0.00	-16.06	40.05	100.56	916.67	-19.20
2340.00	H	22.04	Ambient	3.37	31.87	0.00	-16.06	41.22	115.11	500.00	-12.76
2340.00	V	21.57	Ambient	3.37	31.87	0.00	-16.06	40.75	109.05	500.00	-13.23
2730.00	H	22.53	Ambient	3.71	32.53	0.00	-16.06	42.71	136.68	500.00	-11.27
2730.00	V	22.36	Ambient	3.71	32.53	0.00	-16.06	42.54	134.03	500.00	-11.44
3120.00	H	23.13	Ambient	4.31	32.80	0.00	-16.06	44.17	161.71	916.67	-15.07
3120.00	V	22.70	Ambient	4.31	32.80	0.00	-16.06	43.74	153.90	916.67	-15.50
3510.00	H	21.68	Ambient	4.76	32.91	0.00	-16.06	43.29	146.09	916.67	-15.95
3510.00	V	21.54	Ambient	4.76	32.91	0.00	-16.06	43.15	143.76	916.67	-16.09
3900.00	H	22.47	Ambient	4.78	33.24	0.00	-16.06	44.43	166.49	500.00	-9.55
3900.00	V	21.96	Ambient	4.78	33.24	0.00	-16.06	43.92	157.00	500.00	-10.06