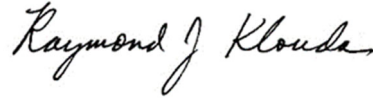




Engineering Test Report No. 2601373-04 Rev A

Report Date	July 28, 2026	
Manufacturer Name	The Chamberlain Group LLC	
Manufacturer Address	300 Windsor Dr Oak Brook, IL 60523	
Test Item Name Model No.	Jackshaft with Release, 700lb, 120/240V RJDC7S1BER	
Date Received	July 15, 2026	
Test Dates	July 15, 2026 – July 28, 2026	
Specifications	FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247 Innovation, Science, and Economic Development Canada, RSS-GEN Innovation, Science, and Economic Development Canada, RSS-247	
Test Facility	Elite Electronic Engineering, Inc. 1516 Centre Circle, Downers Grove, IL 60515	FCC Reg. Number: 269750 IC Reg. Number: 2987A CAB Identifier: US0107
Signature		
Tested by	Edwin Casas	
Signature		
Approved by	Raymond J. Klouda, Registered Professional Engineer of Illinois – 44894	
PO Number	4900107853	

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1. Report Revision History

Revision	Date	Description
–	11 AUG 2026	Initial Release of Engineering Test Report No. 2601374-04
A	18 AUG 2026 By Edwin Casas	- Cover Page: Added “Rev A” to the test report number. - Throughout Report: Added “Rev A” to the test report number in the header. - Section 2.3: Added representative model note to the EUT identification table. - Section 31: Added Informative Annex.

2. Introduction

2.1. Scope of Tests

This document presents the results of a series of RF emissions tests that were performed on The Chamberlain Group LLC Jackshaft with Release, 700lb, 120/240V (hereinafter referred to as the Equipment Under Test (EUT)). The EUTs were manufactured and submitted for testing by The Chamberlain Group LLC located in Oak Brook, IL.

2.2. Purpose

The test series was performed to determine if the EUTs meet the RF emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, §15.109 for Receivers and Subpart C, §15.247 for a Frequency Hopping Spread Spectrum intentional radiator operating within the 902 – 928MHz band.

The test series was also performed to determine if the EUTs meet the RF emission requirements of the Innovation, Science, and Economic Development Canada Radio Standards Specification RSS-Gen and Innovation, Science, and Economic Development Canada Radio Standards Specification RSS-247 for a Frequency Hopping Spread Spectrum intentional radiator operating within the 902 – 928MHz band.

Testing was performed in accordance with ANSI C63.10-2020+Cor. 1:2023+C63.10a:2024.

2.3. Identification of the EUT

The EUTs were identified as follows:

EUT Identification	
Product Description	Jackshaft with Release, 700lb, 120/240V
Model/Part No.	RJDC7S1BER
Serial No.	262264610020 (Radiated sample) N/A (Conducted board sample)
Size of EUT	21.8" x 11.1" x 12.1"
Software/Firmware Version	LPC54k 0.22 (Main) LPC5536 1.1-run-forever (Motor) PG22 1.0.0 (Wall Control) FG12 1.2.0 (Sub-gig radio) RTL8720CM 126A0582phoenix_rtl_mp_litepoint_image_v7.1 (Wi-Fi/BLE radio)
Device Type	Frequency Hopping Transmission Device
Band of Operation	902 – 928MHz
20dB Bandwidth	196.8kHz
Occupied Bandwidth (99% CBW)	184.6kHz
Antenna Type	Dipole
NOTE: This report covers testing only on the representative model number listed above. For a list of all associated model numbers represented by this test data, see the Informative Annex at the end of this report.	

The EUTs listed above were used throughout the test series.

3. Power Input

The radiated sample obtained 120V 60Hz from a 1 meter unshielded power cord. The conducted sample obtained 30VDC.

4. Grounding

The radiated sample was connected to ground through the third wire of the input power cord. The conducted sample was not grounded.

5. Support Equipment

No support equipment was used during the tests.

6. Interconnect Leads

No interconnect leads were used during the tests.

7. Modifications Made to the EUT

No modifications were made to the EUTs during the testing.

8. Modes of Operation

The EUTs and all peripheral equipment were energized. The DUTs were programmed to transmit in one of the following modes:

8.1. Continuous Tx

This mode was achieved by applying power to the EUT and configured to transmit continuously at one of the following frequencies by pressing a button on the PCB: 902.25MHz, 914.75MHz, 926.75MHz. Power setting 20dBm, Modulation On.

8.2. Hopping

This mode was achieved by applying power to the EUT and configured to transmit into a continuous hopping mode by pressing a button on the PCB. Power setting 20dBm, Modulation On.

8.3. Receive Only

This mode was achieved by applying power to the EUT and configured to receive continuously at one of the following frequencies by pressing a button on the PCB: 902.25MHz, 914.75MHz, 926.75MHz.

9. Test Specifications

The tests were performed to selected portions of, and in accordance with, the test specifications.

- Federal Communications Commission "Code of Federal Regulations", Title 47, Chapter I, Subchapter A, Part 15, Subpart B
- Federal Communications Commission "Code of Federal Regulations", Title 47, Chapter I, Subchapter A, 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 9kHz to 40GHz"
- ANSI C63.10-2020+Cor. 1:2023+C63.10a:2024, "American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices"
- Federal Communications Commission Office of Engineering and Technology Laboratory Division, Guidance For Compliance Measurements On Digital Transmission Systems, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating Under Section 15.247 April 2, 2019 KDB 558074 D01v05r02
- RSS-Gen Issue 5, February 2021, Amendment 2, Innovation, Science, and Economic Development Canada, "General Requirements for Compliance of Radio Apparatus"

- RSS-247 Issue 4, July 2025, "Digital Transmission Systems, Frequency Hopping Systems and License-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands"

10. Test Plan

No test plan was provided. Instructions were provided by personnel from The Chamberlain Group LLC and used in conjunction with the FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247, Innovation, Science, and Economic Development Canada, RSS-247, ANSI C63.10-2020+Cor. 1:2023+C63.10a:2024 specifications for transmitters, and FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, Innovation, Science, and Economic Development Canada, RSS-GEN and ANSI C63.4-2014 for receivers.

11. Deviation, Additions to, or Exclusions from Test Specifications

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

12. Laboratory Conditions

The ambient parameters of the laboratory during testing were as follows:

Ambient Parameters	Value
Temperature	23.5°C
Relative Humidity	23%
Atmospheric Pressure	1016mb

13. Summary

The following EMC tests were performed, and the results are shown below:

Test Description	Requirements	Test Method	S/N	Results
Receiver Radiated Emissions	FCC 15.109 ISED RSS-GEN	ANSI C63.4:2014	N/A	Conforms
20dB Bandwidth	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	N/A	Conforms
Occupied Bandwidth (99%)	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	N/A	Conforms
Carrier Frequency Separation	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	N/A	Conforms
Number of Carrier Channels	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	N/A	Conforms
Time of Occupancy	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	N/A	Conforms
Maximum Peak Conducted Output Power	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	N/A	Conforms
Effective Isotropic Radiated Power (EIRP)	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	262264610020	Conforms
Transmitter Radiated Emissions	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	262264610020	Conforms
Band-Edge Compliance	FCC 15.247 ISED RSS-247	ANSI C63.10:2013	N/A	Conforms

14. Sample Calculations

For Radiated Emissions:

The resultant field strength (FS) is a summation in decibels (dB) of the receiver meter reading (MTR), the antenna correction factor (AF), and the cable loss factor (CF). If an external preamplifier is used, the total is reduced by its gain (-PA). If a distance correction (DC) is required, it is added to the total.

$$\text{Formula 1: FS (dB}\mu\text{V/m)} = \text{MTR (dB}\mu\text{V)} + \text{AF (dB/m)} + \text{CF (dB)} + (-\text{PA (dB)}) + \text{DC (dB)}$$

To convert the Field Strength dB μ V/m term to μ V/m, the dB μ V/m is first divided by 20. The Base 10 AntiLog is taken of this quotient. The result is the Field Strength value in μ V/m terms.

$$\text{Formula 2: FS (}\mu\text{V/m)} = \text{AntiLog} [(\text{FS (dB}\mu\text{V/m)})/20]$$

For Effective Isotropic Radiated Power:

The resultant effective radiated power is a summation of the matched signal (dBm), equivalent antenna gain (dB) and the cable loss factor (dB).

$$\text{EIRP (dBm)} = \text{Matched Signal (dBm)} + \text{Antenna Gain (dB)} - \text{Cable Loss (dB)}$$

Alternatively, the effective radiated power can be calculated by summing the measured conducted output power (dBm) and antenna gain (dB)

$$\text{EIRP (dBm)} = \text{Conducted Output Power (dBm)} + \text{Antenna Gain (dB)}$$

15. Statement of Conformity

The Chamberlain Group LLC Jackshaft with Release, 700lb, 120/240V Model No. RJDC7S1BER did fully conform to the selected requirements of FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247 as well as Innovation, Science, and Economic Development Canada, RSS-GEN and Innovation, Science, and Economic Development Canada, RSS-247.

16. Certification

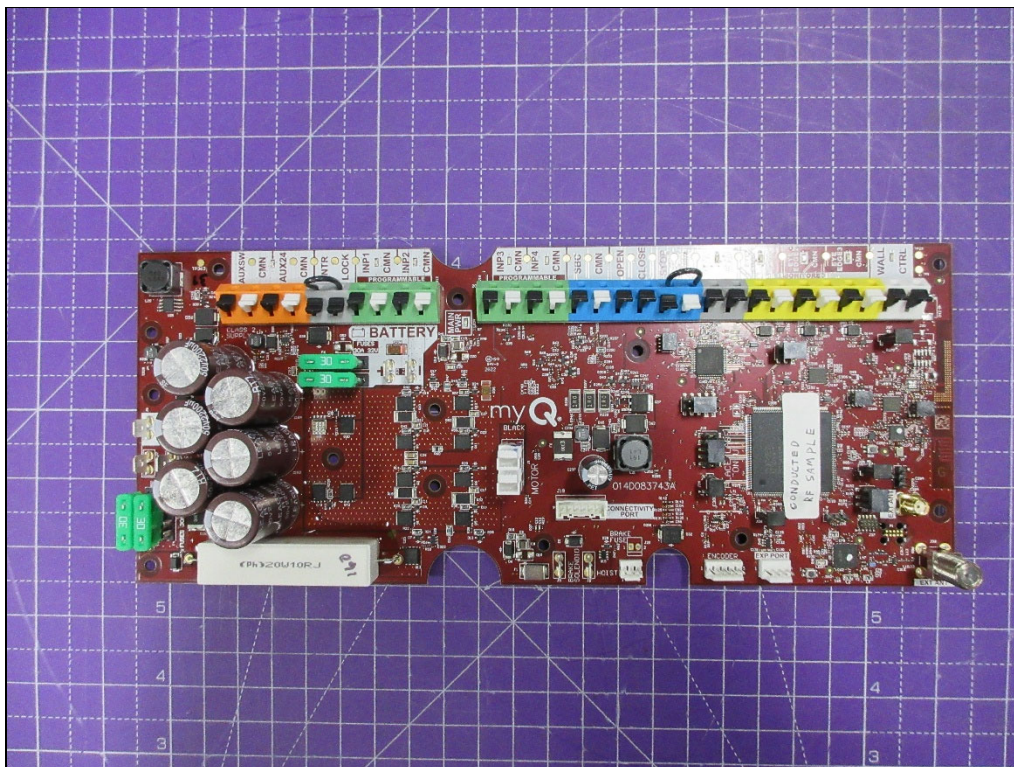
Elite Electronic Engineering Incorporated certifies that the information contained in this report was obtained under conditions which meet or exceed those specified in the FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247 and Innovation, Science, and Economic Development Canada, RSS-247 test specifications. The data presented in this test report pertains to the EUTs as received by the customer on the test date specified. Any electrical or mechanical modifications made to the EUTs subsequent to the specified test date will serve to invalidate the data and void this certification.

17. Photographs of EUT

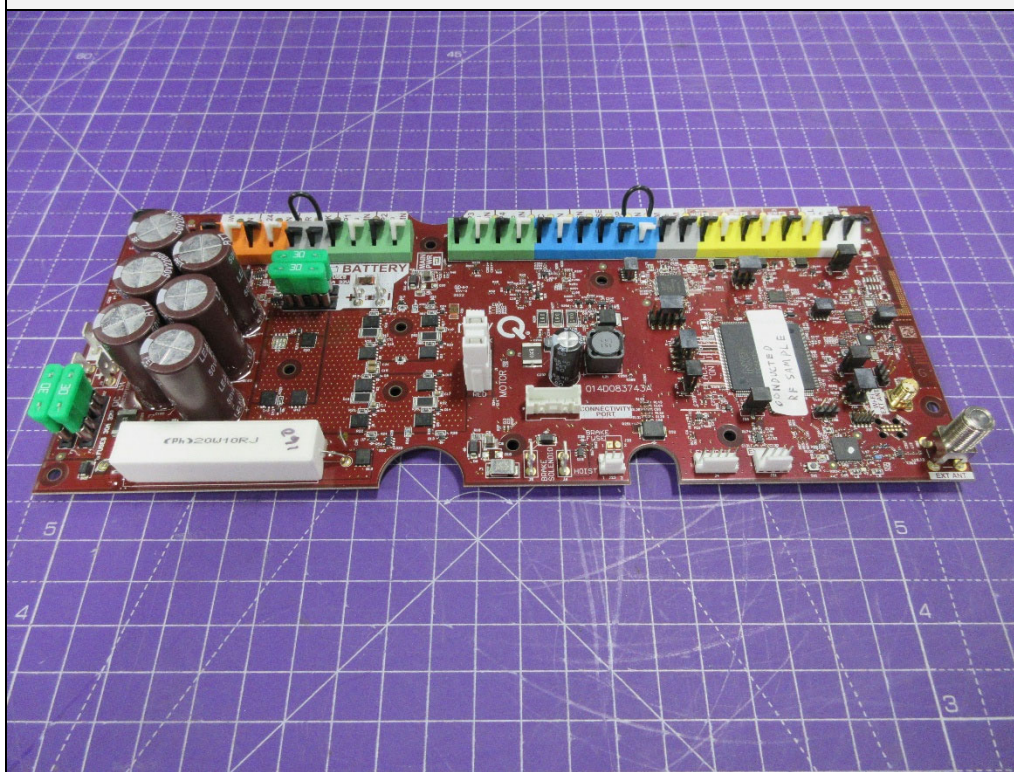


RJDC7S1BER, S/N 262264610020





RJDC7S1BER, S/N N/A (Conducted board sample)



18. Equipment List

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Due Date
APW10	Preamplifier	Planar	PE2-35-120-5R0-10-12-SFF	PL11685/1241	1-18GHz	3/18/2026	3/18/2027
NSDS1	UNIVERSAL SPHERICAL DIPOLE SOURCE	AET	USDS-H	AET-1116		NOTE 1	
NTA2	BILOG ANTENNA	TESEQ	6112D	28040	25-2000MHz	6/21/2024	8/21/2026
NWQ0	Double Ridged Waveguide (3M)	ETS-Lindgren	3117	66657	1-18GHz	6/23/2026	6/23/2028
RBG2	EMI Analyzer	Rohde & Schwarz	ESW44	101591	2HZ-44GHZ	12/12/2025	12/12/2026
RBJ1	EMI Analyzer	Rohde & Schwarz	ESW8	100985	2Hz-8GHz	12/21/2025	12/21/2026
SCB0	PROGRAMABLE POWER SUPPLY	CALIFORNIA INSTRUMENTS	CSW5550-208/156-321-ELF	1513A01939		NOTE 1	
SCB1	PROGRAMABLE POWER SUPPLY	CALIFORNIA INSTRUMENTS	CSW5550-208/156-321-ELF	1513A01938		NOTE 1	
T2DN	Attenuator	WEINSCHTEL	46-20-34	BS2147	DC-18GHz, 20dB, 25W	12/17/2025	12/17/2027
T2DP	Attenuator	WEINSCHTEL	46-20-34	BS0921	DC-18GHz, 20dB, 25W	2/4/2025	2/4/2027
VBV2	COMMERCIAL RADIATED EMISSIONS.EXE	ELITE		---	---	N/A	
XPQ7	HIGH PASS FILTER	K&L MICROWAVE	4IH30-1804/T10000-0	5	1.8-10GHZ	2/4/2025	2/4/2027

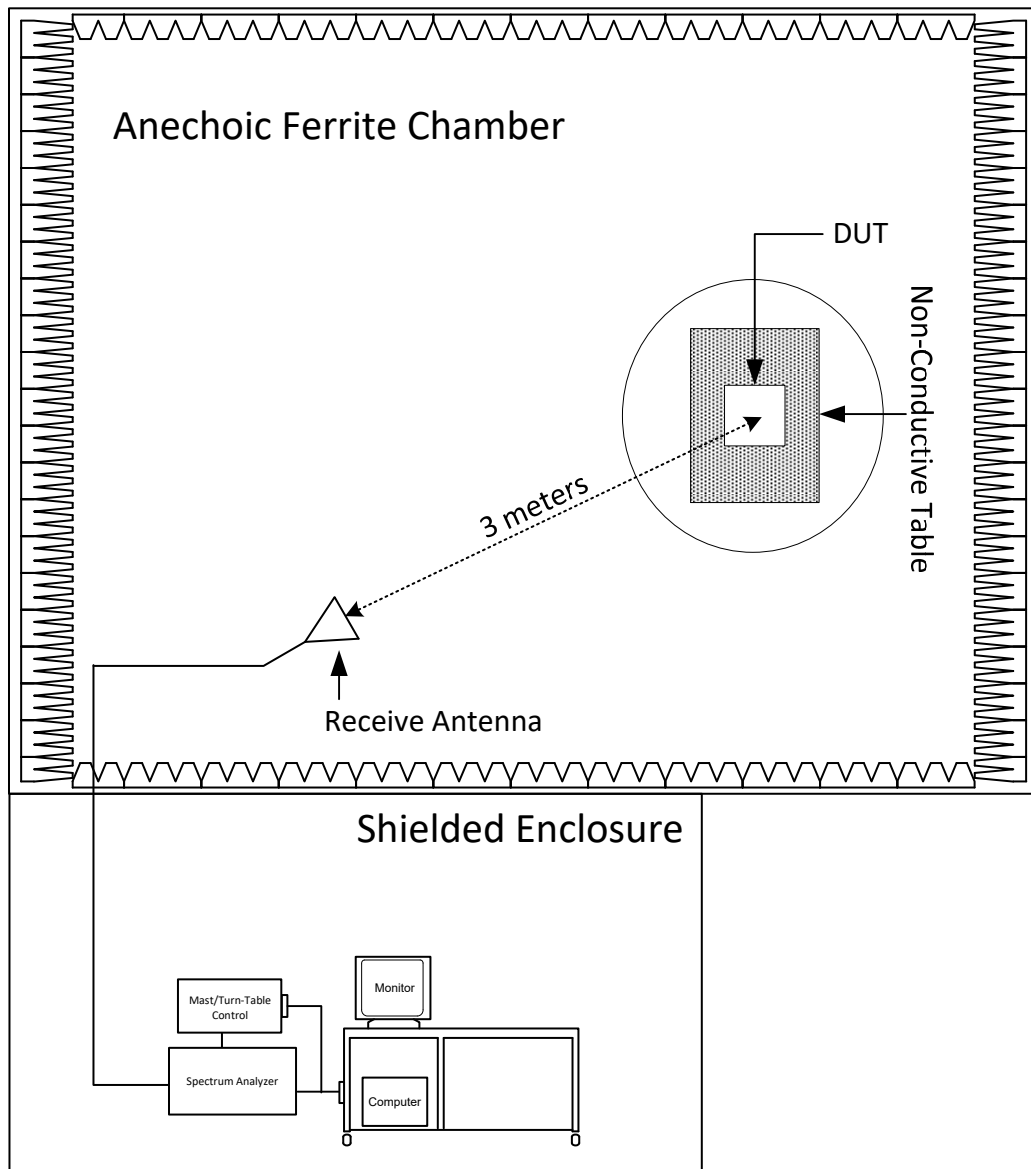
N/A: Not Applicable

I/O: Initial Only

CNR: Calibration Not Required

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.

19. Block Diagram of Test Setup



Radiated Measurements Test Setup

20. Receiver Radiated Emissions

EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Receive Only

Test Site Information	
Setup Format	Tabletop
Type of Test Site	Semi-Anechoic Chamber
Test Site Used	Room #29
Type of Antennas Used	Below 1GHz: Bilog (or equivalent) Above 1GHz: Double-ridged waveguide (or equivalent)
Highest Internal Frequency	926.75MHz
Highest Measurement Frequency	5GHz
Notes	The cables were manually maximized during the preliminary emissions sweeps. The cable arrangement which resulted in the worst-case emissions was utilized.

Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
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

Requirements
The field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the values in the following table.

Radiated Emissions Limits (30MHz to 1GHz)		
Frequency of Emission (MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)
30 – 88	100	40
88 – 216	150	43.5
216 – 960	200	46
Above 960	500	54
Radiated Emissions Limits (Above 1GHz)		
Frequency of Emission (MHz)	Field Strength Peak Limit (dBμV/m)	Field Strength Average Limit (dBμV/m)
Above 1000	74	54

Procedure

Since a quasi-peak detector and an average detector require long integration times, it is not practical to automatically sweep through the quasi-peak and average levels. Therefore, radiated emissions from the EUT were first scanned using a peak detector and automatically plotted. The frequencies where significant emission levels were noted were then remeasured using the quasi-peak detector or average detector.

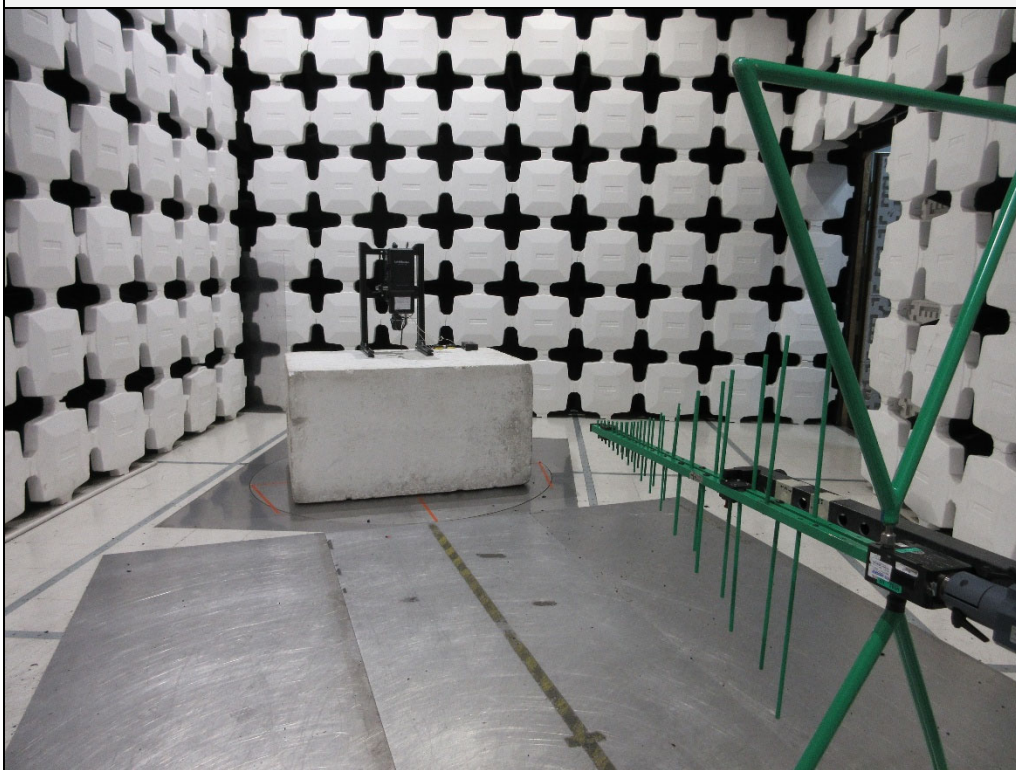
The EUT and all peripheral equipment were placed on an 80cm high non-conductive stand. The broadband measuring antenna was positioned at a 3 meter distance from the EUT. The frequency range from 30MHz to 1GHz was investigated using a peak detector function with the bilog antenna at several heights, horizontal and vertical polarization, and with several different orientations of the EUT with respect to the antenna. The frequency range from 1GHz to 5GHz was investigated using a peak detector function with the double ridged waveguide antenna at several heights, horizontal and vertical polarization, and with several different orientations of the EUT with respect to the antenna. The maximum levels for each antenna polarization were plotted.

Final radiated emissions were performed on all significant broadband and narrowband emissions found in the exploratory sweeps using the following methods:

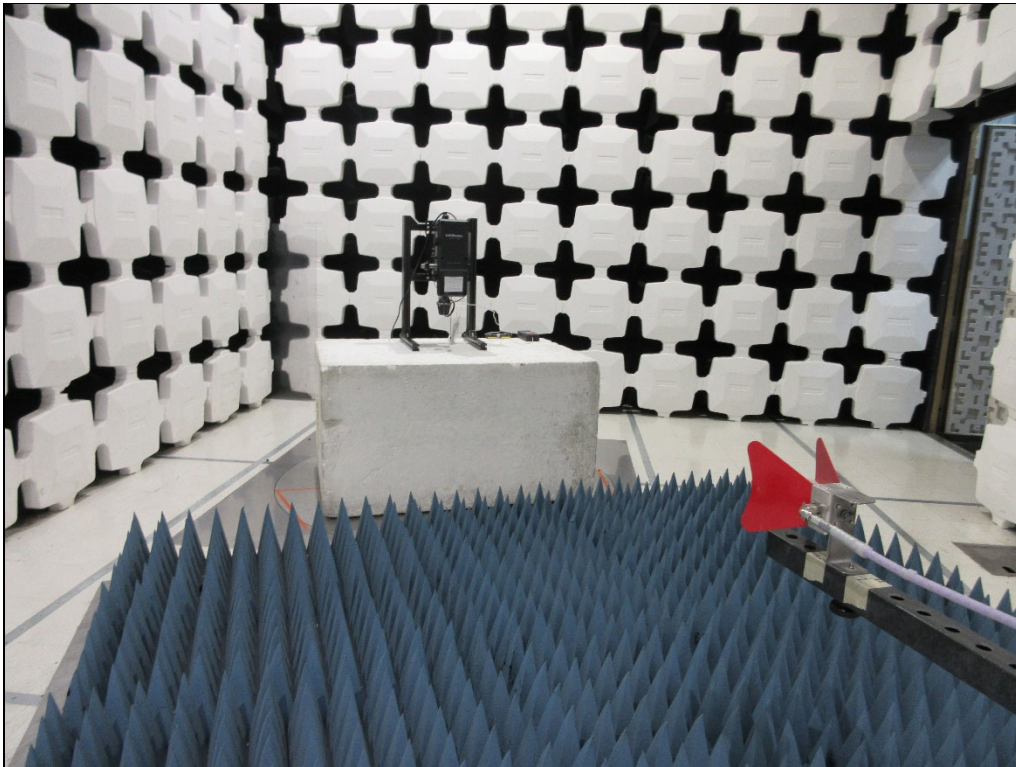
- 1) Measurements from 30MHz to 1GHz were made using a quasi-peak detector and a broadband bilog antenna. Measurements above 1GHz were made using an average detector and a broadband double ridged waveguide antenna.
- 2) To ensure that maximum or worst case, emission levels were measured, the following steps were taken:
 - a) The EUT was rotated so that all sides were exposed to the receiving antenna.
 - b) Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
 - c) The measuring antenna was raised and lowered from 1 to 4 meters for each antenna polarization to maximize the readings.
 - d) 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.



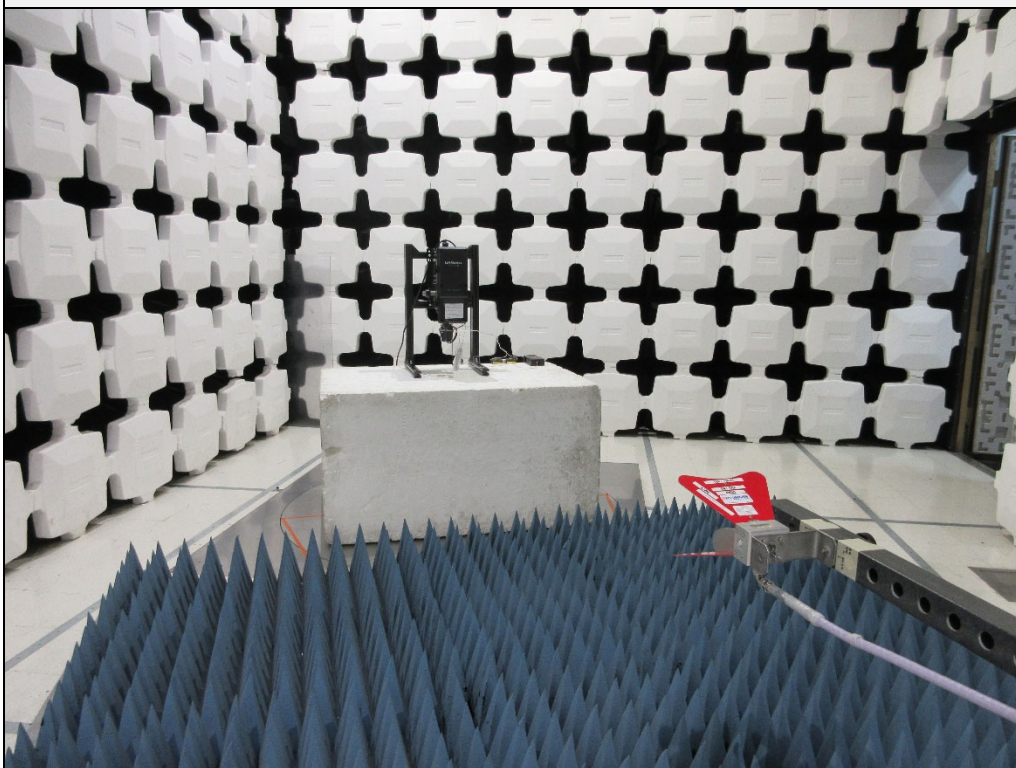
Test Setup for Radiated Emissions: 30MHz to 1GHz, Horizontal Polarization



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



Test Setup for Radiated Emissions: Above 1GHz, Horizontal Polarization



Test Setup for Radiated Emissions: Above 1GHz, Vertical Polarization



FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
Model : Jackshaft 700 RJDC7S1BER
Serial Number : 262264610020
Mode : 902.25MHz Rx pt2
Turntable Step Angle (°) : 22.5
Scan Type : FFT / Time Domain Scan
Test RBW : 120 kHz
Prelim Dwell Time (s) : 0.0001
Notes :
Test Engineer : E. Casas
Test Date : Jul 20, 2026 – 03:18:16 PM

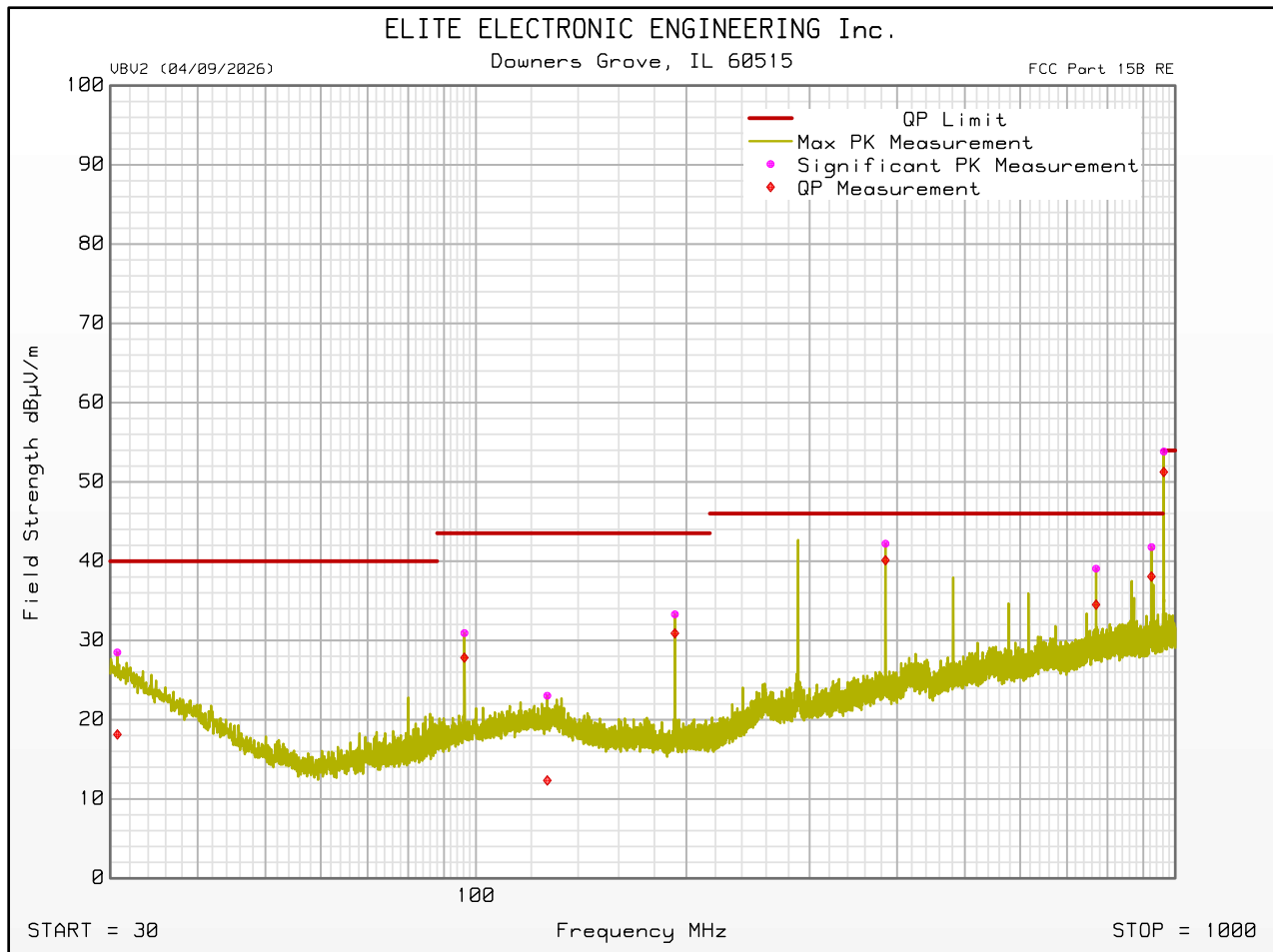
Frequency	Peak Mtr Rdg dBμV	QP Mtr Rdg dBμV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Peak Total dBμV/m	QP Total dBμV/m	QP Limit dBμV/m	QP Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive QP Level
30.69 MHz	4.4	-5.9	23.7	0.0	0.3	0.0	28.5	18.1	40.0	-21.9	Horizontal	200	112.5	
48.9 MHz	11.5	1.4	14.9	0.0	0.4	0.0	26.8	16.7	40.0	-23.3	Vertical	120	270	
49.59 MHz	12.5	6.0	14.6	0.0	0.4	0.0	27.6	21.0	40.0	-19.0	Vertical	120	247.5	
71.4 MHz	11.6	5.2	12.8	0.0	0.5	0.0	24.9	18.5	40.0	-21.5	Vertical	200	22.5	
80.01 MHz	13.0	9.5	13.3	0.0	0.5	0.0	26.9	23.4	40.0	-20.1	Vertical	120	270	
96.22 MHz	13.8	10.7	16.4	0.0	0.6	0.0	30.9	27.8	43.5	-15.7	Horizontal	200	45	
126.4 MHz	3.9	-6.8	18.4	0.0	0.7	0.0	23.0	12.3	43.5	-31.2	Horizontal	120	202.5	
192.43 MHz	17.2	14.8	15.2	0.0	0.9	0.0	33.3	30.9	43.5	-15.1	Horizontal	200	225	
288.69 MHz	24.9	22.2	19.3	0.0	1.0	0.0	45.2	42.6	46.0	-3.4	Vertical	200	180	
384.9 MHz	19.9	17.8	21.1	0.0	1.2	0.0	42.2	40.1	46.0	-5.9	Horizontal	120	180	
481.11 MHz	16.4	13.9	23.6	0.0	1.3	0.0	41.3	38.8	46.0	-7.2	Vertical	120	247.5	
769.89 MHz	11.4	6.8	26.0	0.0	1.7	0.0	39.0	34.5	46.0	-11.5	Horizontal	120	67.5	
924 MHz	13.0	9.3	26.9	0.0	1.8	0.0	41.8	38.0	46.0	-8.0	Horizontal	120	292.5	
962.22 MHz	24.9	22.3	27.0	0.0	1.8	0.0	53.8	51.2	54.0	-2.8	Horizontal	120	337.5	

FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 902.25MHz Rx pt2
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Horizontal
 Scan Type : FFT / Time Domain Scan
 Test RBW : 120 kHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 20, 2026 – 03:18:16 PM

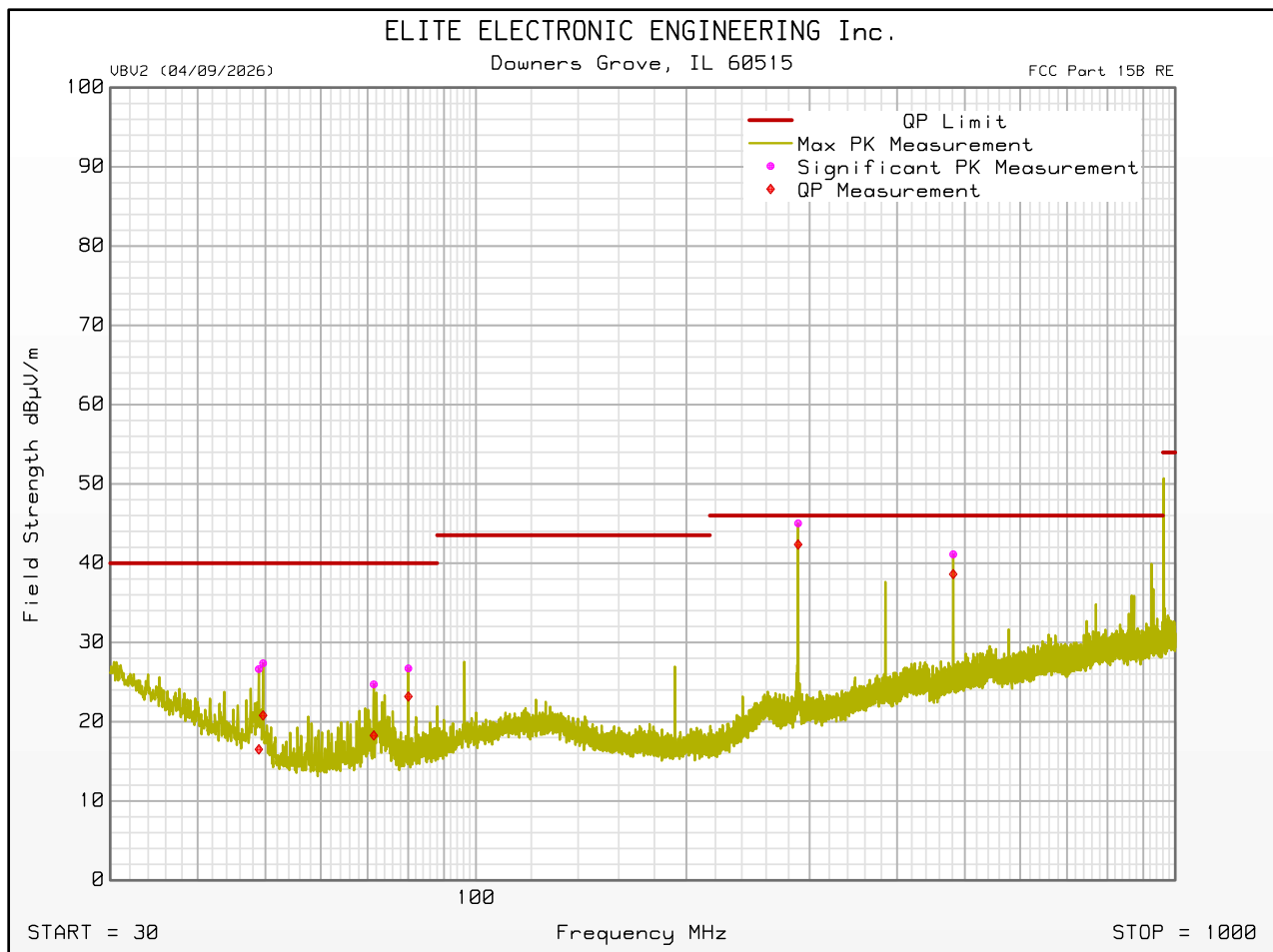


FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 902.25MHz Rx pt2
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Vertical
 Scan Type : FFT / Time Domain Scan
 Test RBW : 120 kHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 20, 2026 – 03:18:16 PM





FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
Model : Jackshaft 700 RJDC7S1BER
Serial Number : 262264610020
Mode : 914.75MHz Rx pt2
Turntable Step Angle (°) : 22.5
Scan Type : FFT / Time Domain Scan
Test RBW : 120 kHz
Prelim Dwell Time (s) : 0.0001
Notes :
Test Engineer : E. Casas
Test Date : Jul 20, 2026 – 03:45:26 PM

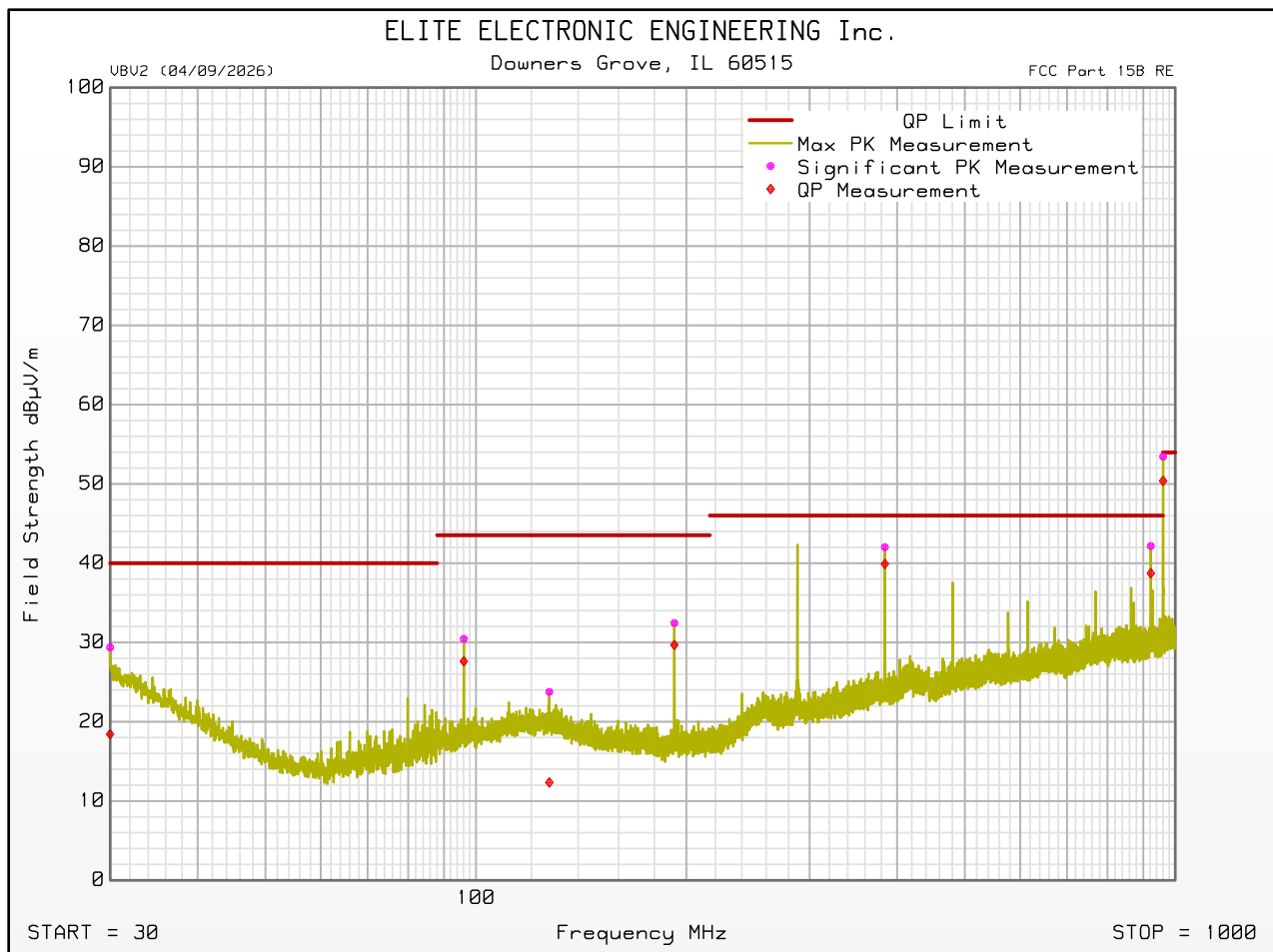
Frequency	Peak Mtr Rdg dBμV	QP Mtr Rdg dBμV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Peak Total dBμV/m	QP Total dBμV/m	QP Limit dBμV/m	QP Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive QP Level
30.03 MHz	5.1	-5.9	24.0	0.0	0.3	0.0	29.5	18.6	40.0	-21.4	Horizontal	200	67.5	
47.61 MHz	13.0	6.7	15.4	0.0	0.4	0.0	28.9	22.5	40.0	-17.5	Vertical	120	315	
49.62 MHz	12.9	6.7	14.6	0.0	0.4	0.0	28.0	21.7	40.0	-18.3	Vertical	120	337.5	
70.05 MHz	11.5	5.5	12.7	0.0	0.5	0.0	24.7	18.8	40.0	-21.2	Vertical	200	22.5	
80.01 MHz	12.4	8.7	13.3	0.0	0.5	0.0	26.3	22.6	40.0	-20.9	Vertical	200	315	
96.22 MHz	13.5	10.7	16.4	0.0	0.6	0.0	30.6	27.7	43.5	-15.8	Horizontal	200	45	
127.51 MHz	4.8	-6.6	18.4	0.0	0.7	0.0	23.9	12.5	43.5	-31.0	Horizontal	200	90	
192.49 MHz	16.5	13.7	15.2	0.0	0.9	0.0	32.6	29.8	43.5	-16.2	Horizontal	200	202.5	
288.66 MHz	25.0	22.3	19.3	0.0	1.0	0.0	45.3	42.7	46.0	-3.3	Vertical	200	180	
384.87 MHz	19.9	17.8	21.1	0.0	1.2	0.0	42.2	40.0	46.0	-6.0	Horizontal	120	180	
481.23 MHz	15.9	12.7	23.6	0.0	1.3	0.0	40.9	37.7	46.0	-8.3	Vertical	120	247.5	
924 MHz	13.6	10.1	26.9	0.0	1.8	0.0	42.3	38.9	46.0	-7.1	Horizontal	200	337.5	
929.61 MHz	9.0	3.1	26.8	0.0	1.8	0.0	37.7	31.8	46.0	-14.2	Vertical	200	22.5	
962.07 MHz	24.7	21.6	27.0	0.0	1.8	0.0	53.6	50.5	54.0	-3.5	Horizontal	120	337.5	

FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 914.75MHz Rx pt2
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Horizontal
 Scan Type : FFT / Time Domain Scan
 Test RBW : 120 kHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 20, 2026 – 03:45:26 PM

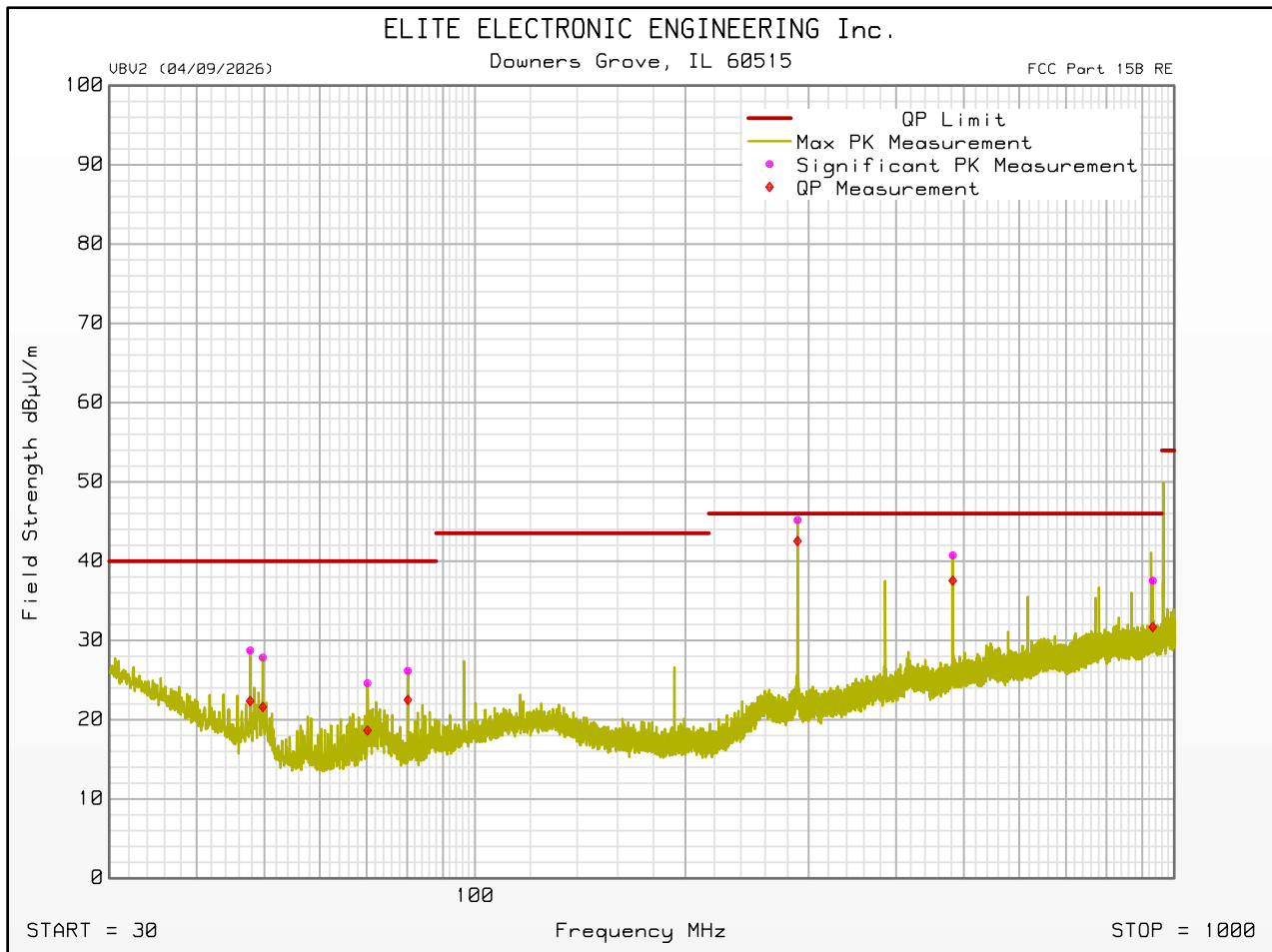


FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 914.75MHz Rx pt2
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Vertical
 Scan Type : FFT / Time Domain Scan
 Test RBW : 120 kHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 20, 2026 – 03:45:26 PM





FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
Model : Jackshaft 700 RJDC7S1BER
Serial Number : 262264610020
Mode : 926.75MHz Rx
Turntable Step Angle (°) : 22.5
Scan Type : FFT / Time Domain Scan
Test RBW : 120 kHz
Prelim Dwell Time (s) : 0.0001
Notes :
Test Engineer : E. Casas
Test Date : Jul 20, 2026 – 01:36:40 PM

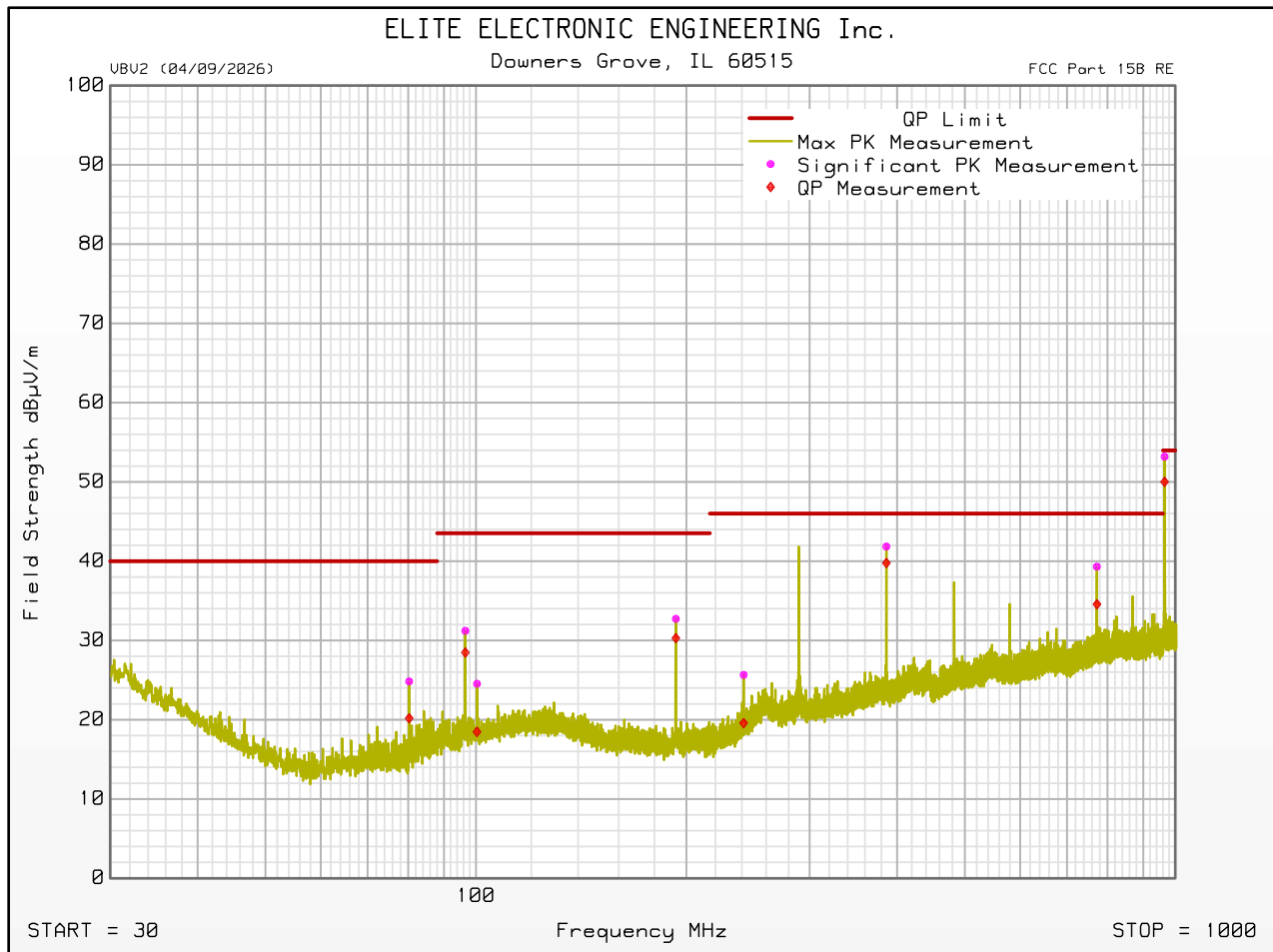
Frequency	Peak Mtr Rdg dBµV	QP Mtr Rdg dBµV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Peak Total dBµV/m	QP Total dBµV/m	QP Limit dBµV/m	QP Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive QP Level
30.36 MHz	4.8	-5.9	23.8	0.0	0.3	0.0	29.0	18.3	40.0	-21.7	Vertical	200	22.5	
47.58 MHz	11.7	5.1	15.4	0.0	0.4	0.0	27.5	21.0	40.0	-19.0	Vertical	120	292.5	
49.59 MHz	13.5	5.9	14.6	0.0	0.4	0.0	28.5	20.9	40.0	-19.1	Vertical	120	337.5	
72.66 MHz	10.9	3.6	12.8	0.0	0.5	0.0	24.3	16.9	40.0	-23.1	Vertical	200	67.5	
79.98 MHz	11.2	6.5	13.3	0.0	0.5	0.0	25.1	20.5	40.0	-23.0	Horizontal	200	22.5	
96.22 MHz	14.4	11.7	16.4	0.0	0.6	0.0	31.5	28.7	43.5	-14.8	Horizontal	340	67.5	
100 MHz	7.1	1.0	17.0	0.0	0.6	0.0	24.8	18.7	43.5	-24.8	Horizontal	200	67.5	
192.46 MHz	16.9	14.4	15.2	0.0	0.9	0.0	33.0	30.6	43.5	-15.4	Horizontal	200	225	
240.6 MHz	7.3	1.2	17.6	0.0	0.9	0.0	25.9	19.8	46.0	-26.2	Horizontal	200	90	
288.66 MHz	24.5	21.8	19.3	0.0	1.0	0.0	44.9	42.2	46.0	-3.8	Vertical	200	157.5	
384.9 MHz	19.8	17.7	21.1	0.0	1.2	0.0	42.1	40.0	46.0	-6.0	Horizontal	120	180	
481.2 MHz	15.7	12.7	23.6	0.0	1.3	0.0	40.7	37.7	46.0	-8.3	Vertical	120	247.5	
769.8 MHz	11.9	7.1	26.0	0.0	1.7	0.0	39.6	34.8	46.0	-11.2	Horizontal	120	67.5	
866.19 MHz	9.7	2.6	26.5	0.0	1.8	0.0	37.9	30.9	46.0	-23.1	Vertical	120	67.5	
962.01 MHz	24.5	21.4	27.0	0.0	1.8	0.0	29.0	18.3	54.0	-21.7	Horizontal	120	337.5	

FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 926.75MHz Rx
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Horizontal
 Scan Type : FFT / Time Domain Scan
 Test RBW : 120 kHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 20, 2026 – 01:36:40 PM

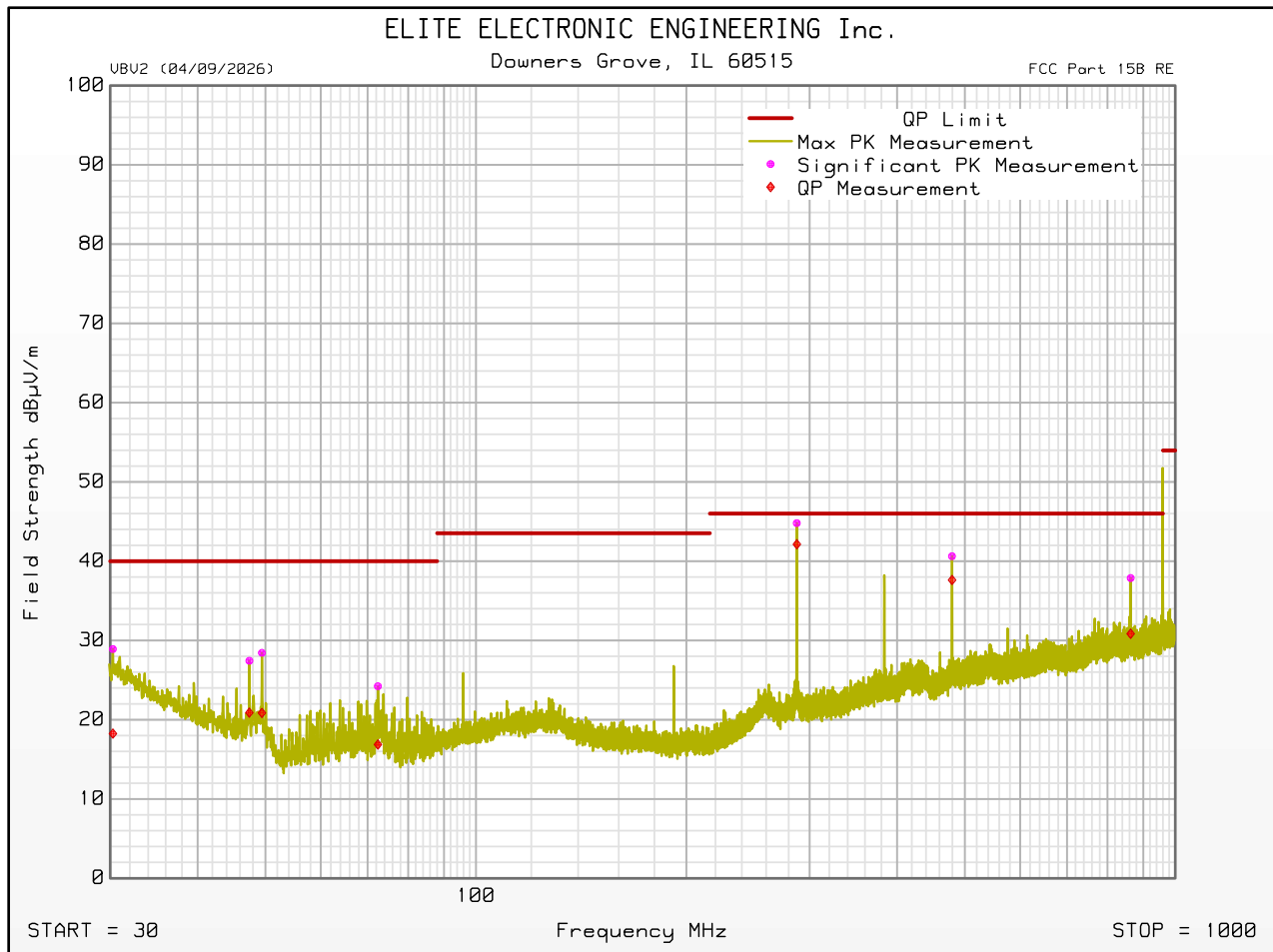


FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 926.75MHz Rx
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Vertical
 Scan Type : FFT / Time Domain Scan
 Test RBW : 120 kHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 20, 2026 – 01:36:40 PM





FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
Model : Jackshaft 700 RJDC7S1BER
Serial Number : 262264610020
Mode : 902.25MHz Rx
Turntable Step Angle (°) : 22.5
Scan Type : FFT / Time Domain Scan
Test RBW : 1 MHz
Prelim Dwell Time (s) : 0.0001
Notes :
Test Engineer : E. Casas
Test Date : Jul 22, 2026 – 02:24:00 PM

Frequency	Peak Mtr Rdg dBμV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Peak Total dBμV/m	Peak Limit dBμV/m	Peak Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive Peak Level
1.155 GHz	56.0	28.7	-41.3	2.0	0.0	45.4	74.0	-28.6	Horizontal	200	67.5	
1.348 GHz	56.7	29.9	-41.1	2.2	0.0	47.6	74.0	-26.4	Horizontal	340	0	
2.021 GHz	51.6	32.4	-41.1	2.7	0.0	45.6	74.0	-28.4	Horizontal	120	45	
2.902 GHz	49.0	33.2	-40.7	3.3	0.0	44.9	74.0	-29.1	Horizontal	200	270	
3.629 GHz	48.9	34.1	-40.6	3.6	0.0	46.1	74.0	-27.9	Vertical	120	157.5	
4.769 GHz	48.5	35.7	-40.4	4.1	0.0	47.9	74.0	-26.1	Horizontal	200	157.5	

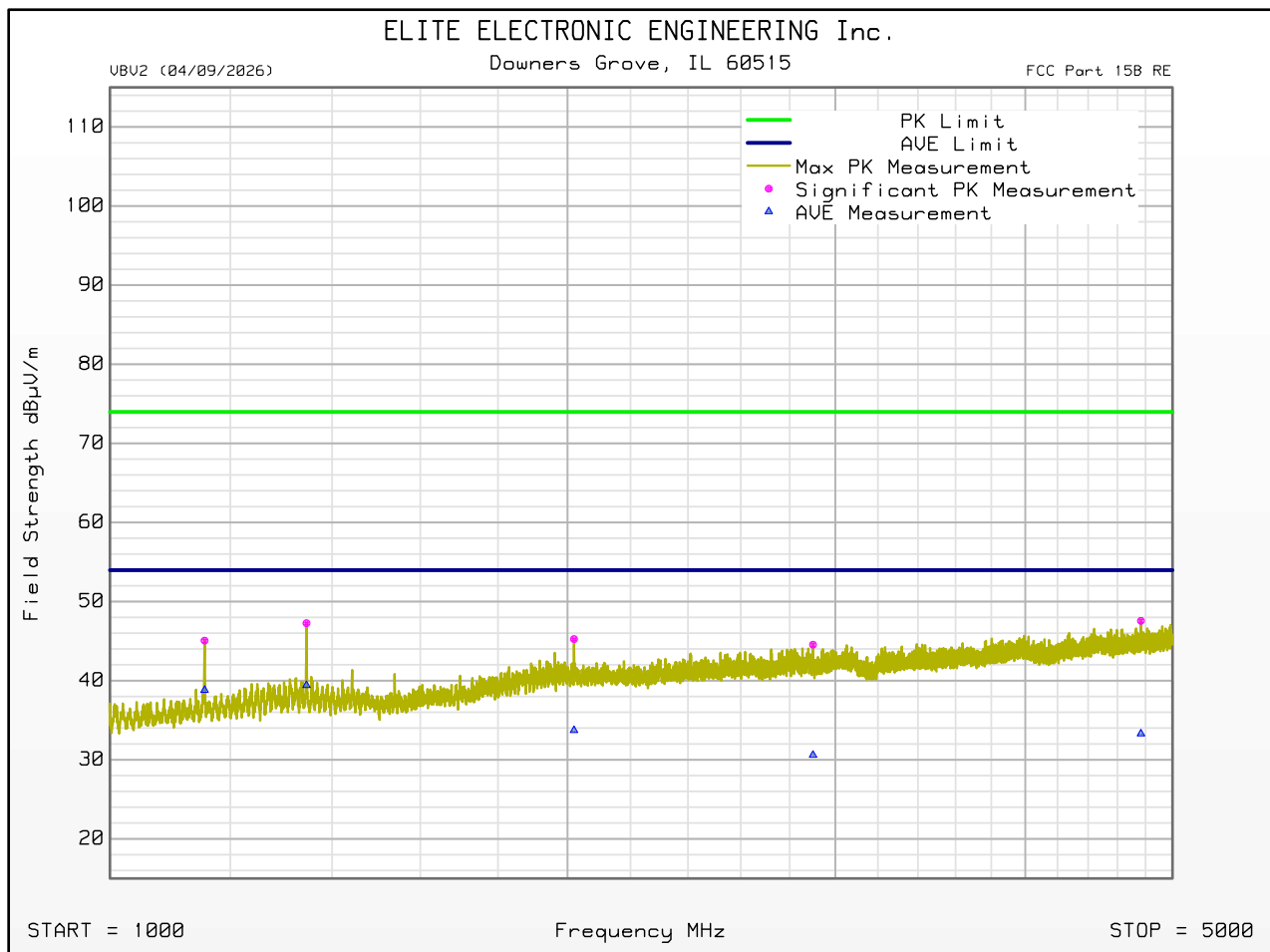
Frequency	Average Mtr Rdg dBμV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Average Total dBμV/m	Average Limit dBμV/m	Average Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive Average Level
1.155 GHz	49.7	28.7	-41.3	2.0	0.0	39.1	54.0	-14.9	Horizontal	200	67.5	
1.348 GHz	48.8	29.9	-41.1	2.2	0.0	39.8	54.0	-14.2	Horizontal	340	0	
2.021 GHz	40.0	32.4	-41.1	2.7	0.0	34.1	54.0	-19.9	Horizontal	120	45	
2.902 GHz	35.1	33.2	-40.7	3.3	0.0	30.9	54.0	-23.1	Horizontal	200	270	
3.629 GHz	34.6	34.1	-40.6	3.6	0.0	31.7	54.0	-22.3	Vertical	120	157.5	
4.769 GHz	34.3	35.7	-40.4	4.1	0.0	33.6	54.0	-20.4	Horizontal	200	157.5	

FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 902.25MHz Rx
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Horizontal
 Scan Type : FFT / Time Domain Scan
 Test RBW : 1 MHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 22, 2026 – 02:24:00 PM

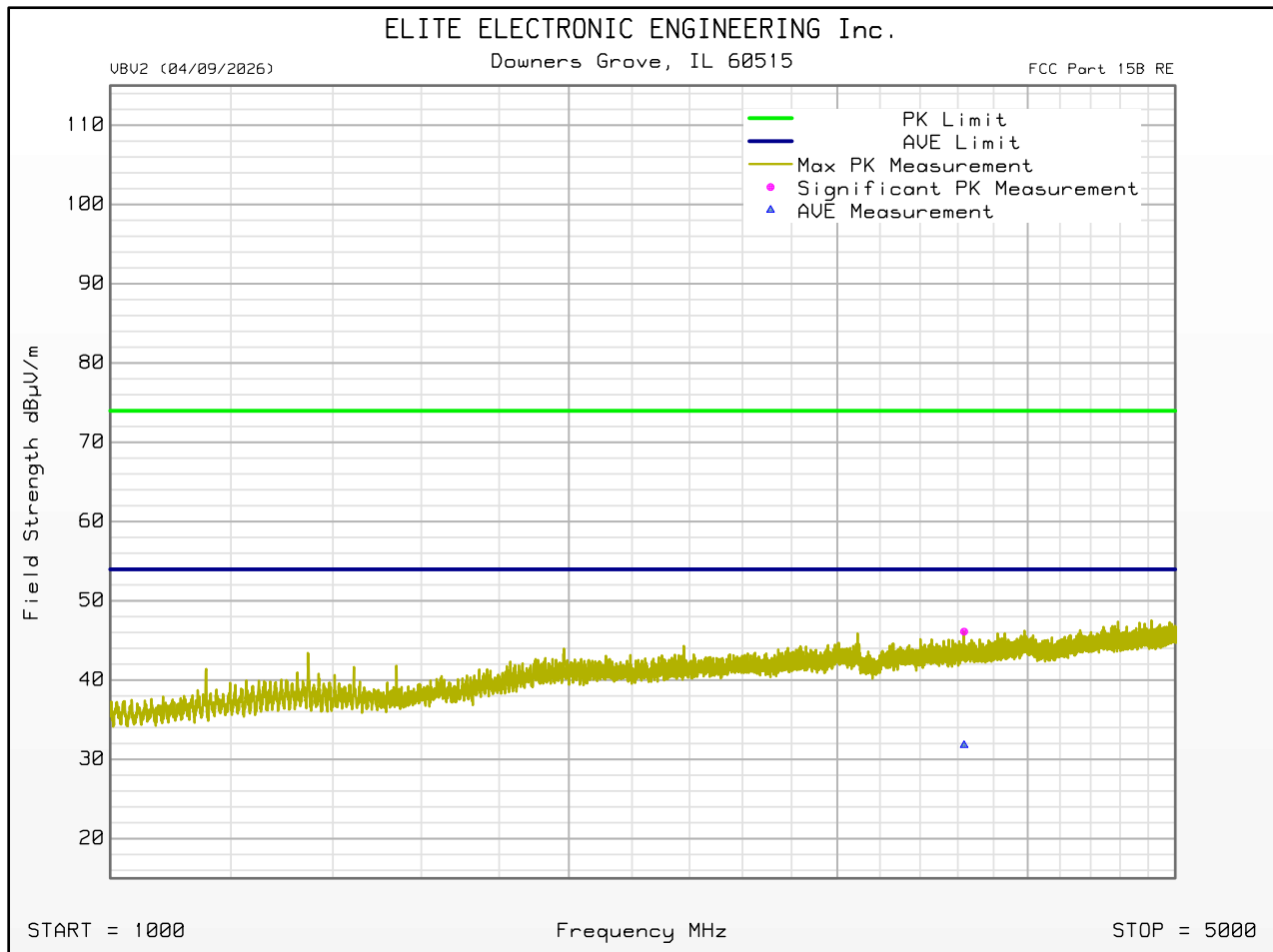


FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 902.25MHz Rx
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Vertical
 Scan Type : FFT / Time Domain Scan
 Test RBW : 1 MHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 22, 2026 – 02:24:00 PM





FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
Model : Jackshaft 700 RJDC7S1BER
Serial Number : 262264610020
Mode : 914.75MHz Rx
Turntable Step Angle (°) : 22.5
Scan Type : FFT / Time Domain Scan
Test RBW : 1 MHz
Prelim Dwell Time (s) : 0.0001
Notes :
Test Engineer : E. Casas
Test Date : Jul 22, 2026 – 02:56:14 PM

Frequency	Peak Mtr Rdg dBμV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Peak Total dBμV/m	Peak Limit dBμV/m	Peak Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive Peak Level
1.155 GHz	55.1	28.7	-41.3	2.0	0.0	44.5	74.0	-29.5	Horizontal	200	67.5	
1.348 GHz	55.5	29.9	-41.1	2.2	0.0	46.4	74.0	-27.6	Horizontal	340	0	
1.982 GHz	49.8	32.4	-41.2	2.7	0.0	43.8	74.0	-30.2	Horizontal	120	45	
2.848 GHz	48.9	33.4	-40.7	3.2	0.0	44.8	74.0	-29.2	Horizontal	340	202.5	
3.283 GHz	49.1	33.6	-40.6	3.5	0.0	45.6	74.0	-28.4	Vertical	340	315	
4.786 GHz	48.5	35.7	-40.4	4.1	0.0	47.9	74.0	-26.1	Horizontal	340	157.5	

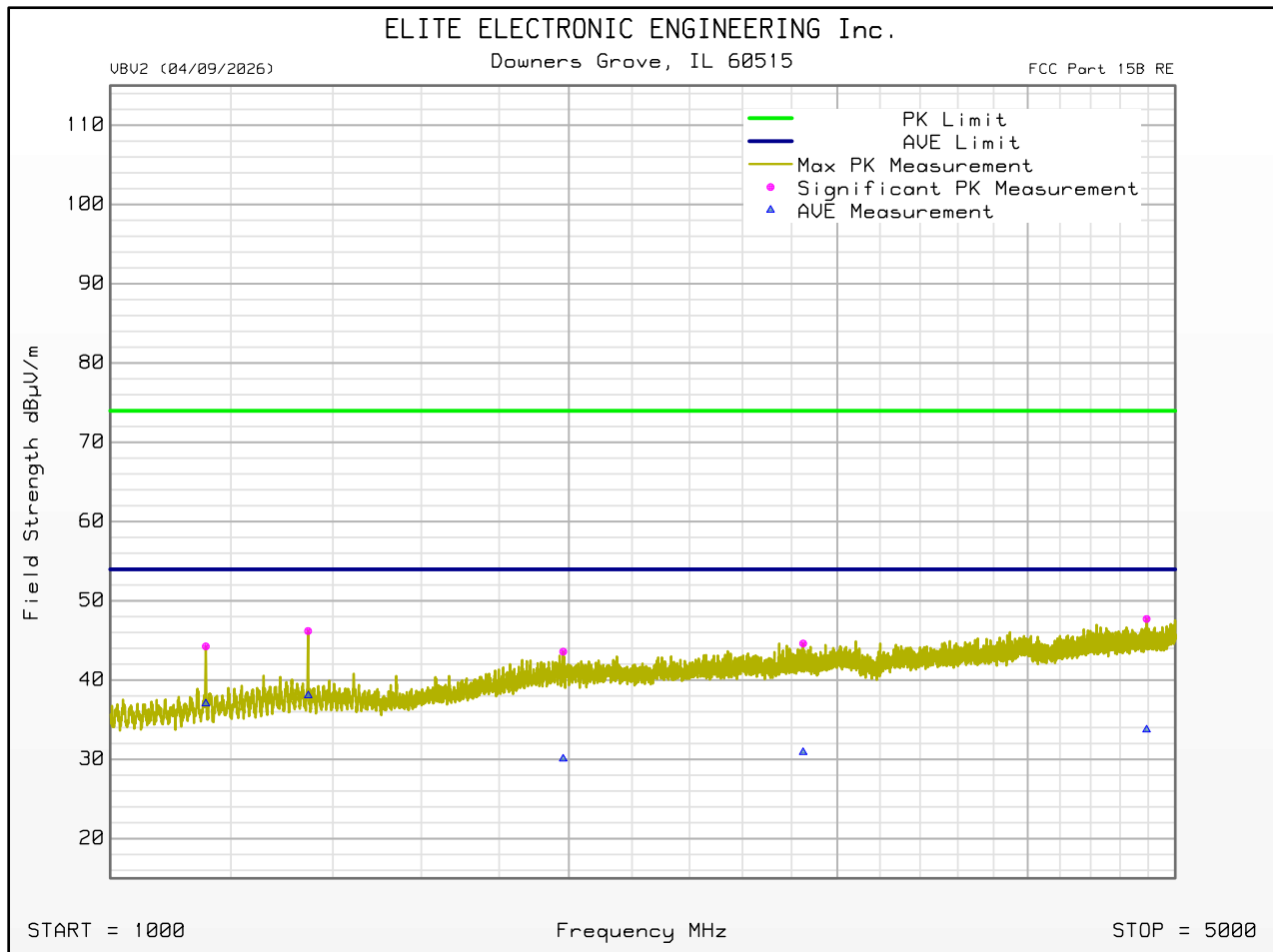
Frequency	Average Mtr Rdg dBμV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Average Total dBμV/m	Average Limit dBμV/m	Average Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive Average Level
1.155 GHz	47.9	28.7	-41.3	2.0	0.0	37.3	54.0	-16.7	Horizontal	200	67.5	
1.348 GHz	47.3	29.9	-41.1	2.2	0.0	38.3	54.0	-15.7	Horizontal	340	0	
1.982 GHz	36.3	32.4	-41.2	2.7	0.0	30.3	54.0	-23.7	Horizontal	120	45	
2.848 GHz	35.1	33.4	-40.7	3.2	0.0	31.1	54.0	-22.9	Horizontal	340	202.5	
3.283 GHz	34.6	33.6	-40.6	3.5	0.0	31.1	54.0	-22.9	Vertical	340	315	
4.786 GHz	34.5	35.7	-40.4	4.1	0.0	34.0	54.0	-20.0	Horizontal	340	157.5	

FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 914.75MHz Rx
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Horizontal
 Scan Type : FFT / Time Domain Scan
 Test RBW : 1 MHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 22, 2026 – 02:56:14 PM

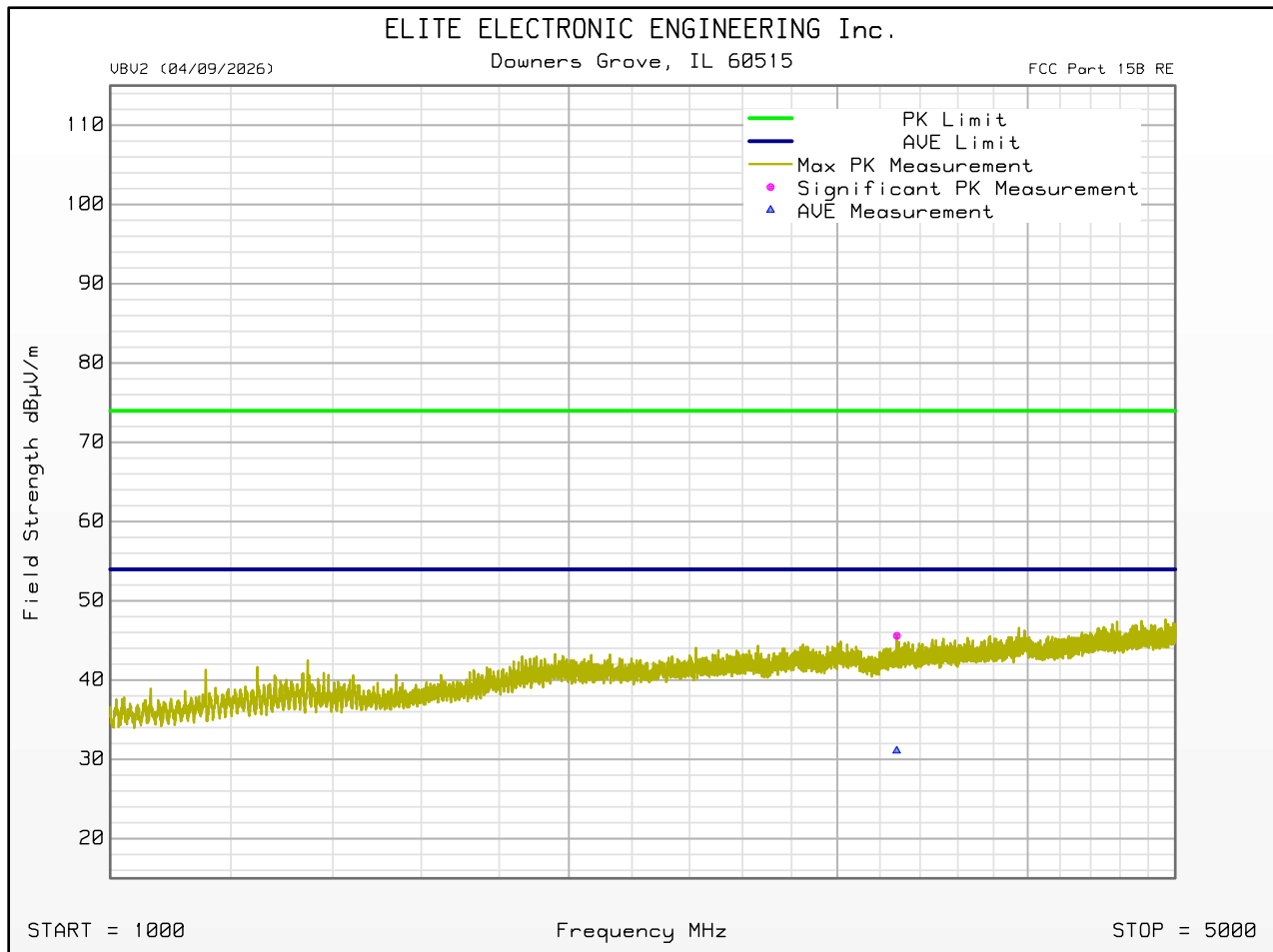


FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 914.75MHz Rx
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Vertical
 Scan Type : FFT / Time Domain Scan
 Test RBW : 1 MHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 22, 2026 – 02:56:14 PM





FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
Model : Jackshaft 700 RJDC7S1BER
Serial Number : 262264610020
Mode : 926.75MHz Rx
Turntable Step Angle (°) : 22.5
Scan Type : FFT / Time Domain Scan
Test RBW : 1 MHz
Prelim Dwell Time (s) : 0.0001
Notes :
Test Engineer : E. Casas
Test Date : Jul 22, 2026 – 03:23:44 PM

Frequency	Peak Mtr Rdg dBµV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Peak Total dBµV/m	Peak Limit dBµV/m	Peak Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive Peak Level
1.155 GHz	54.4	28.7	-41.3	2.0	0.0	43.8	74.0	-30.2	Horizontal	120	67.5	
1.347 GHz	55.0	29.9	-41.1	2.2	0.0	45.9	74.0	-28.1	Horizontal	340	0	
1.962 GHz	50.5	32.3	-41.2	2.7	0.0	44.4	74.0	-29.6	Vertical	200	180	
2.88 GHz	48.7	33.3	-40.7	3.3	0.0	44.6	74.0	-29.4	Horizontal	120	45	
3.724 GHz	48.6	34.3	-40.6	3.6	0.0	46.0	74.0	-28.0	Vertical	200	315	
4.678 GHz	48.7	35.5	-40.4	4.1	0.0	47.9	74.0	-26.1	Horizontal	340	180	

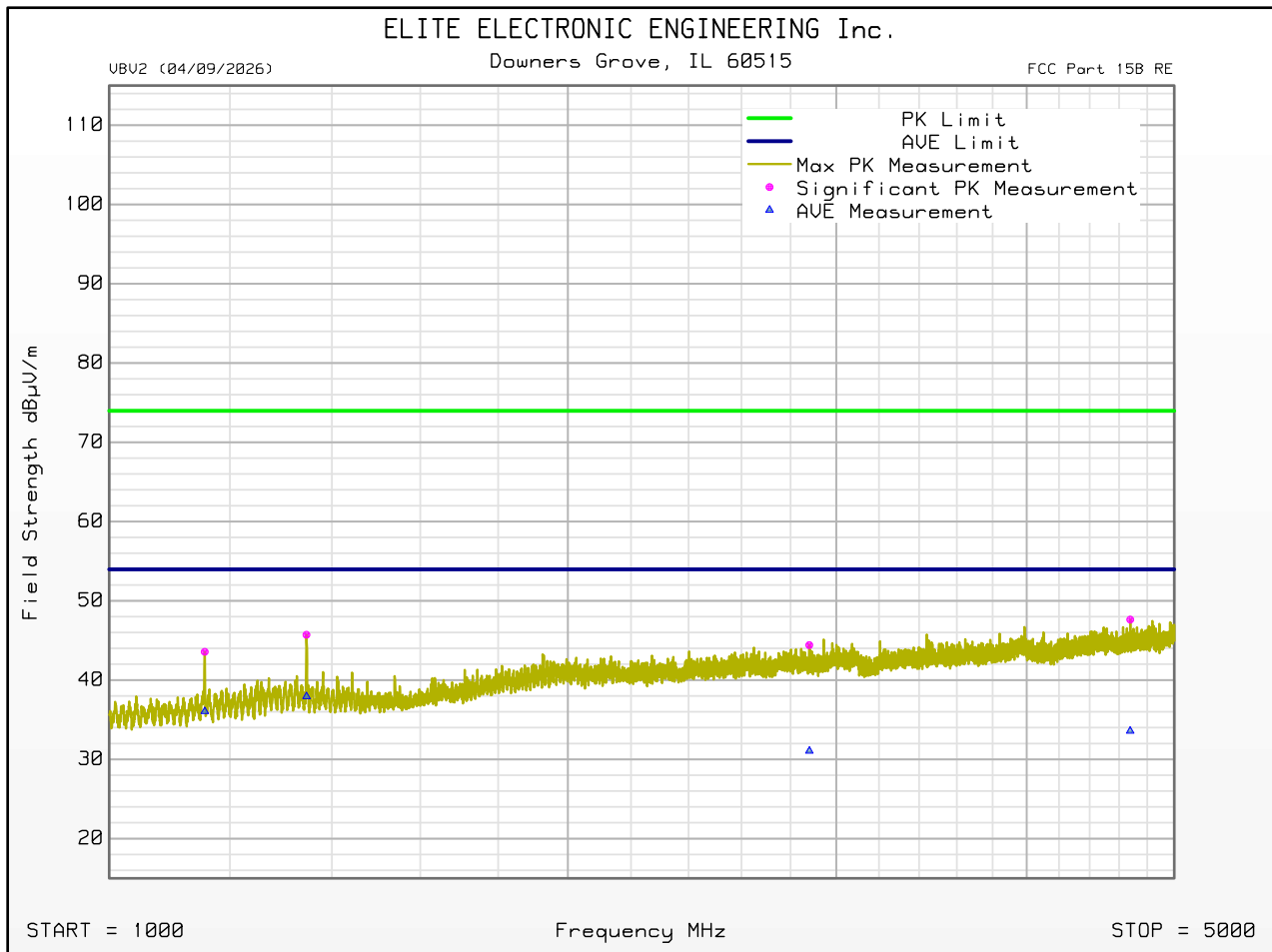
Frequency	Average Mtr Rdg dBµV	Ant Fac dB/m	Amp Fac dB	Cbl Fac dB	Dist Corr dB	Average Total dBµV/m	Average Limit dBµV/m	Average Lim Mrg dB	Ant Pol	Mast Ht cm	Angle °	Excessive Average Level
1.155 GHz	46.9	28.7	-41.3	2.0	0.0	36.3	54.0	-17.7	Horizontal	120	67.5	
1.347 GHz	47.2	29.9	-41.1	2.2	0.0	38.2	54.0	-15.8	Horizontal	340	0	
1.962 GHz	36.5	32.3	-41.2	2.7	0.0	30.4	54.0	-23.6	Vertical	200	180	
2.88 GHz	35.4	33.3	-40.7	3.3	0.0	31.3	54.0	-22.7	Horizontal	120	45	
3.724 GHz	34.6	34.3	-40.6	3.6	0.0	32.0	54.0	-22.0	Vertical	200	315	
4.678 GHz	34.6	35.5	-40.4	4.1	0.0	33.8	54.0	-20.2	Horizontal	340	180	

FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 926.75MHz Rx
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Horizontal
 Scan Type : FFT / Time Domain Scan
 Test RBW : 1 MHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 22, 2026 – 03:23:44 PM

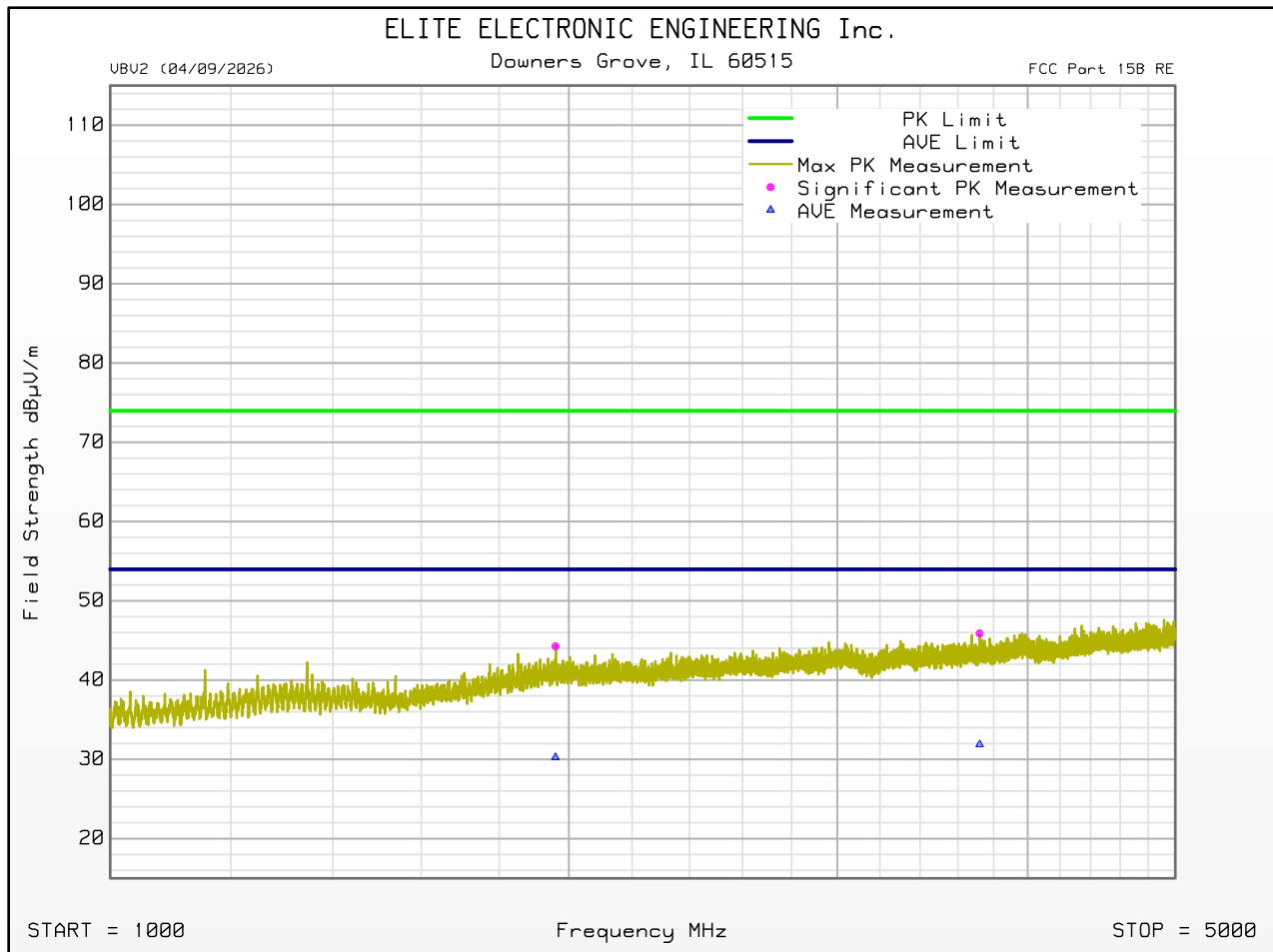


FCC Part 15B 15.109

Radiated Emissions - Scan Summary

Software Revision: VBV2 (04/09/2026)

Manufacturer : Chamberlain
 Model : Jackshaft 700 RJDC7S1BER
 Serial Number : 262264610020
 Mode : 926.75MHz Rx
 Turntable Step Angle (°) : 22.5
 Antenna Polarization : Vertical
 Scan Type : FFT / Time Domain Scan
 Test RBW : 1 MHz
 Prelim Dwell Time (s) : 0.0001
 Notes :
 Test Engineer : E. Casas
 Test Date : Jul 22, 2026 – 03:23:44 PM



21. 20dB Bandwidth

EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx

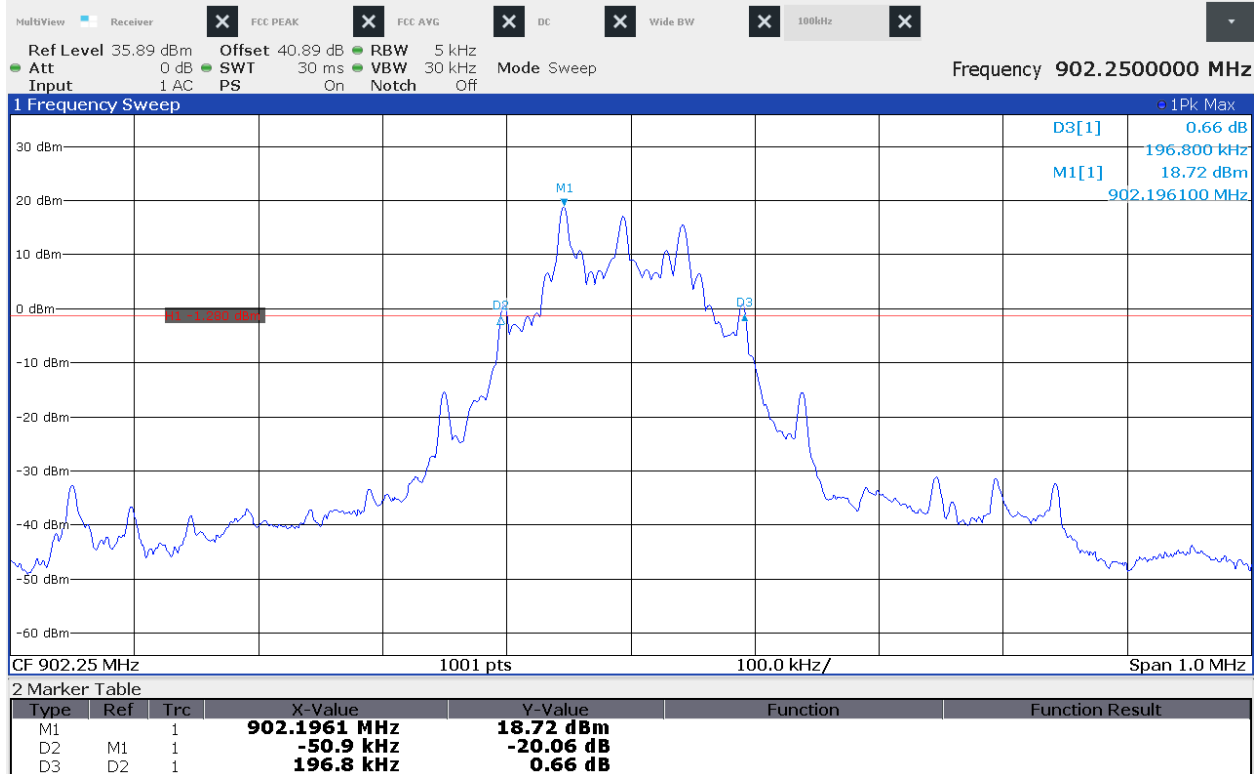
Test Setup Details	
Setup Format	Tabletop
Measurement Method	Antenna Conducted
Type of Test Site	Tabletop
Test Site Used	N/A
Notes	None

Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
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

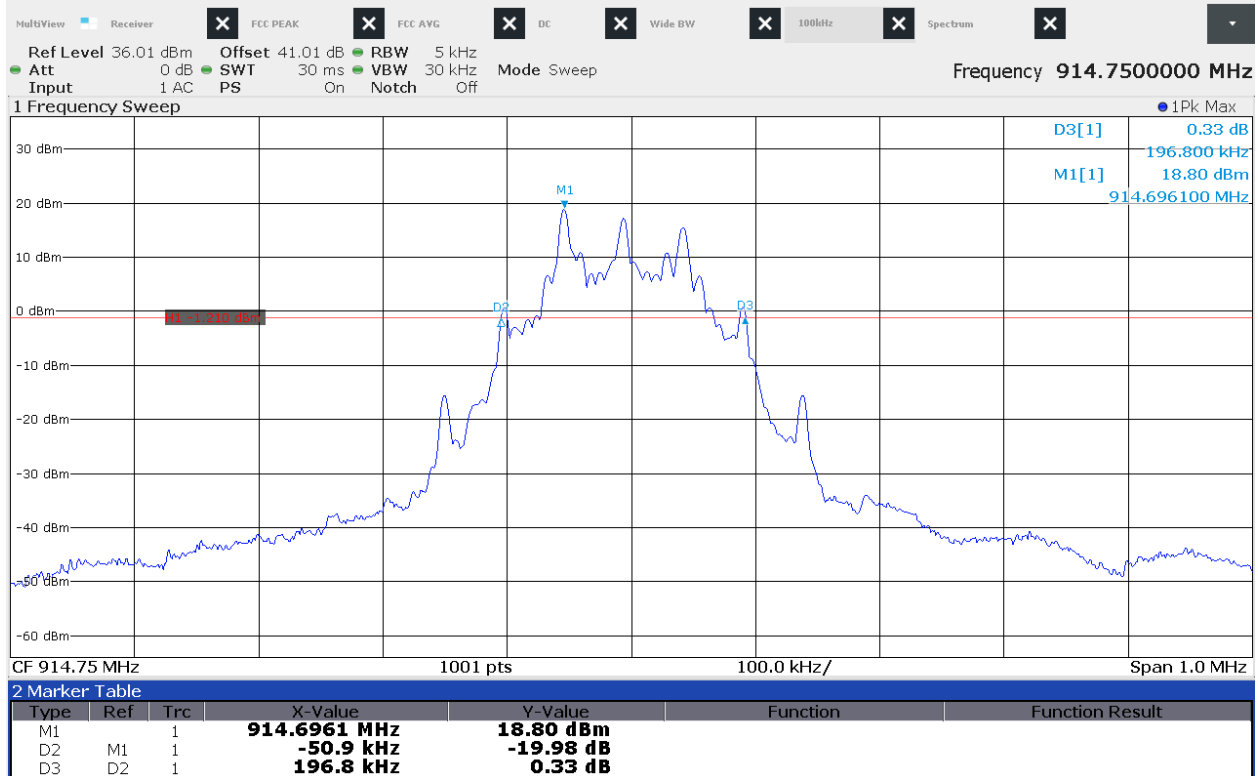
Requirements
Systems using frequency hopping techniques operating in the 902 – 928MHz band are allowed a maximum 20dB bandwidth of 500kHz.

Procedure
The antenna port of the EUT was connected to the spectrum analyzer through 40dB of attenuation. With the hopping function disabled, the EUT was allowed to transmit continuously. The frequency hopping channel was set separately to low, middle, and high hopping channels. The resolution bandwidth (RBW) was set to $\geq 1\%$ and $\leq 5\%$ of the 20dB BW. The video bandwidth (VBW) was set to at least three (3) times the RBW. The span was set to approximately two (2) to five (5) times the 20dB bandwidth. The 'Max-Hold' function was engaged. The analyzer was allowed to scan until the envelope of the transmitter bandwidth was defined. The analyzer's display was then screenshot and saved.

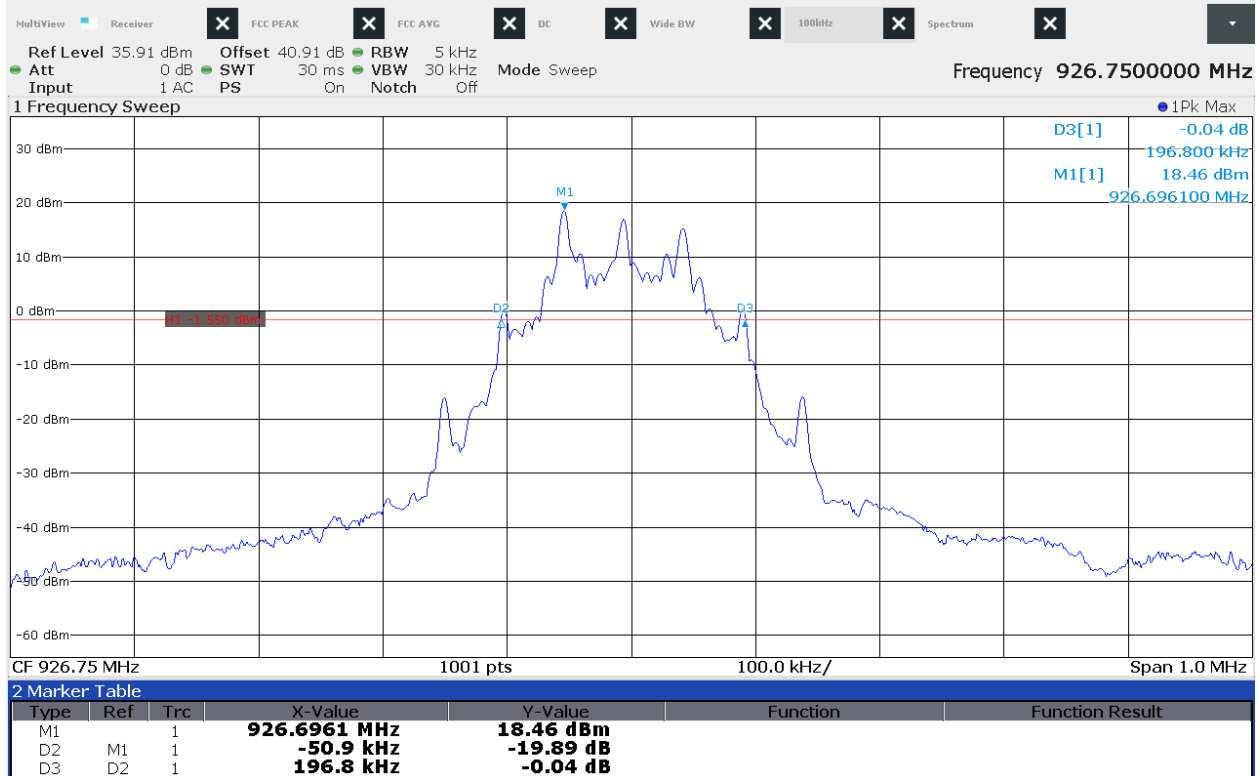
Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	902.25MHz
Result	20dB BW = 196.8kHz
Notes	None



Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	914.75MHz
Result	20dB BW = 196.8kHz
Notes	None



Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	926.75MHz
Result	20dB BW = 196.8kHz
Notes	None



22. Occupied Bandwidth (99%)

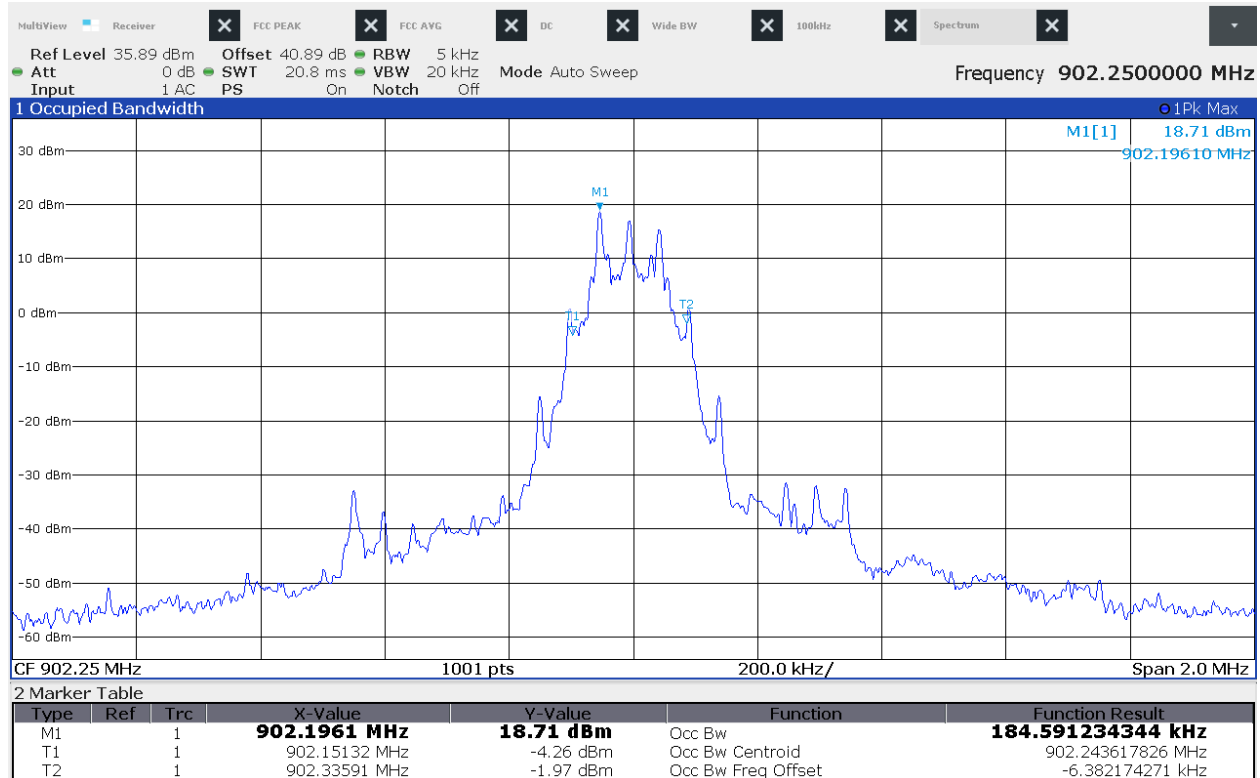
EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx

Test Setup Details	
Setup Format	Tabletop
Measurement Method	Antenna Conducted
Type of Test Site	Tabletop
Test Site Used	N/A
Type of Antennas Used	N/A
Notes	None

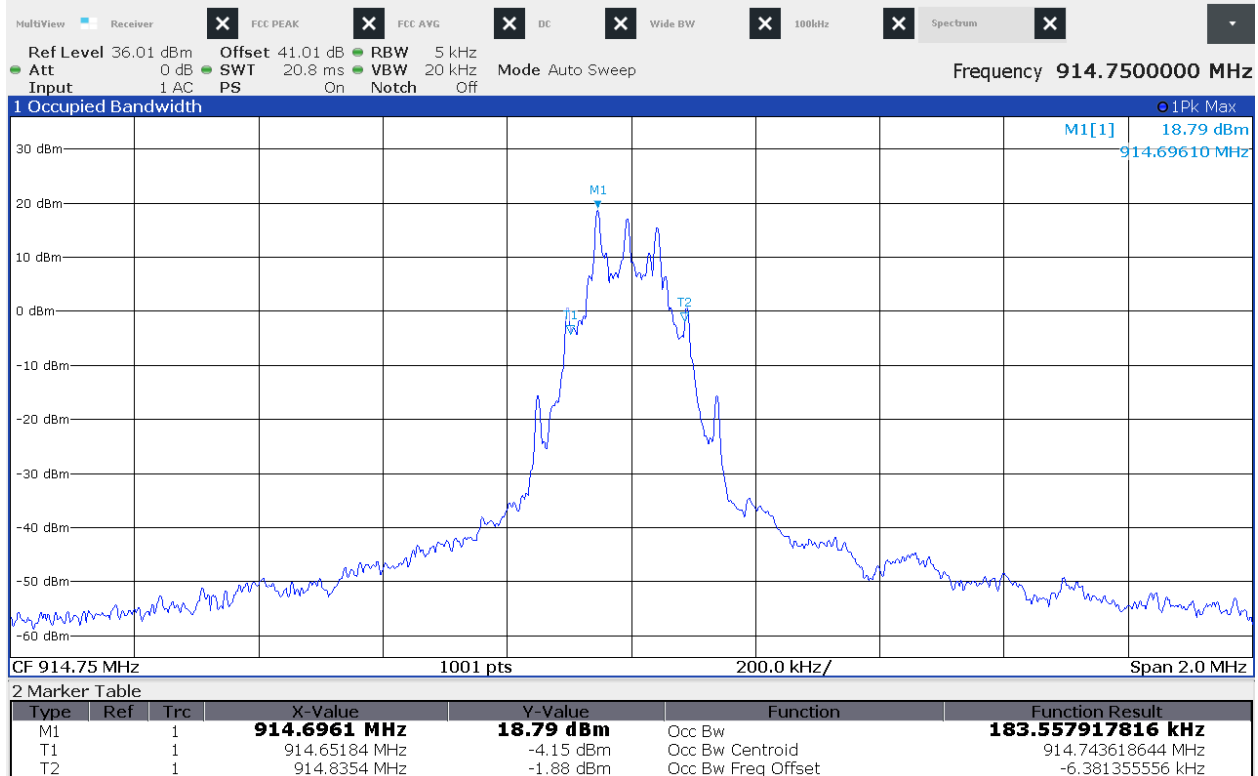
Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
Radiated disturbance (electric field strength on an open area test site or alternative test site) (30 MHz – 1000 MHz)	4.3
Radiated disturbance (electric field strength on an open area test site or alternative test site) (1 GHz – 6 GHz)	3.1

Procedure
The antenna port of the EUT was connected to the spectrum analyzer through 40dB of attenuation. The frequency hopping channel was set separately to low, middle, and high hopping channels. The resolution bandwidth (RBW) was set to $\geq 1\%$ and $\leq 5\%$ of the 99% emission bandwidth. The video bandwidth (VBW) was set to at least three (3) times the RBW. The span was set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency. The 'Max-Hold' function was engaged. The analyzer was allowed to scan until the envelope of the transmitter bandwidth was defined. The analyzer's display was plotted using a 'screen dump' utility.

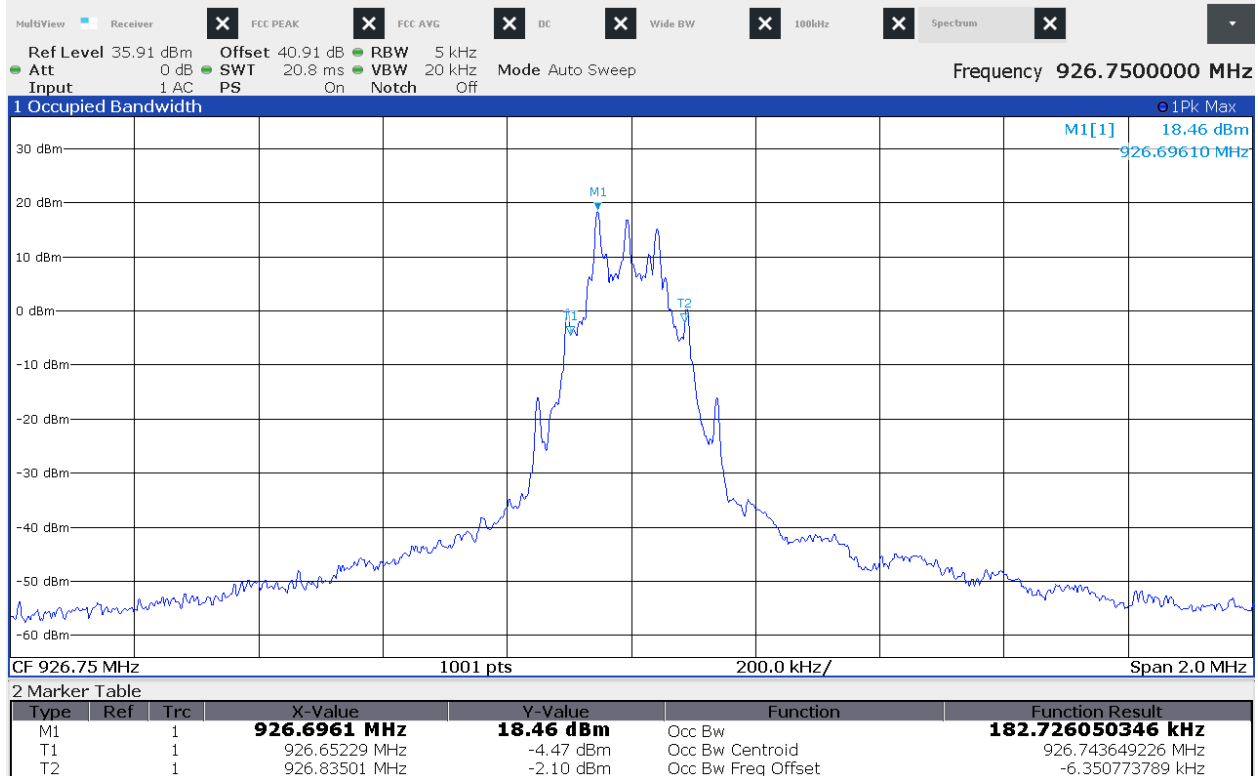
Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	902.25MHz
Result	OBW = 184.59kHz
Notes	None



Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	914.75MHz
Result	OBW =183.56kHz
Notes	None



Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	926.75MHz
Result	OBW = 182.73kHz
Notes	None



23. Carrier Frequency Separation

EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Hopping

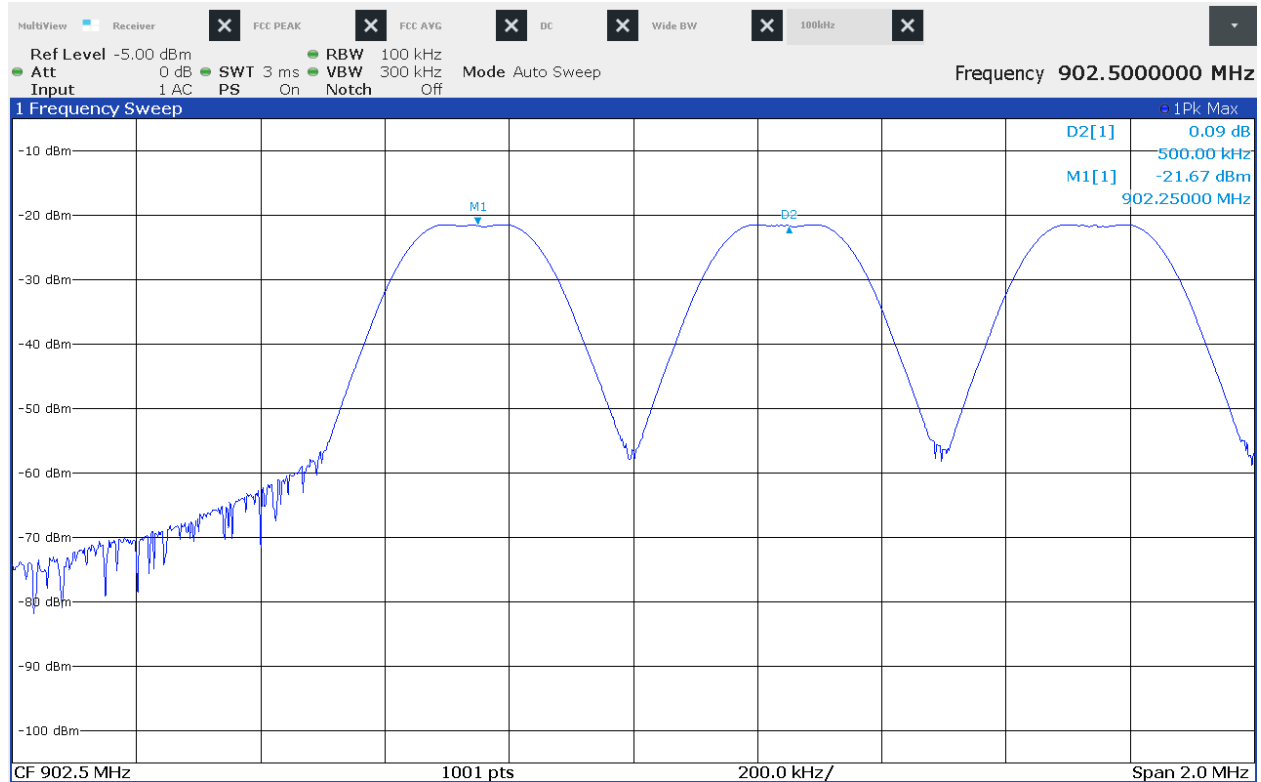
Test Setup Details	
Setup Format	Tabletop
Measurement Method	Antenna Conducted
Type of Test Site	Tabletop
Test Site Used	N/A
Type of Antennas Used	N/A
Notes	None

Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
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

Requirement
Channel carrier frequencies shall be separated by a minimum of 25kHz or the 20dB bandwidth, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5MHz band may have hopping channel carrier frequencies that are separated by 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125mW.

Procedure
The antenna port of the EUT was connected to the spectrum analyzer through 40dB of attenuation. With the hopping function enabled, the EUT was allowed to transmit continuously. Span was set wide enough to capture the peaks of two adjacent channels. The resolution bandwidth (RBW) was set to approximately 30% of the channel spacing. The video bandwidth (VBW) was set $\geq$ the RBW. The peak detector and 'Max-Hold' function were engaged. When the trace stabilized after multiple scans, the marker-delta function was used to determine the separation between the peaks of the adjacent channels. The analyzer's display was then screenshot and saved.

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Hopping
Frequency Tested	N/A
Result	Separation = 500kHz
Notes	None



24. Number of Carrier Channels

EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Hopping

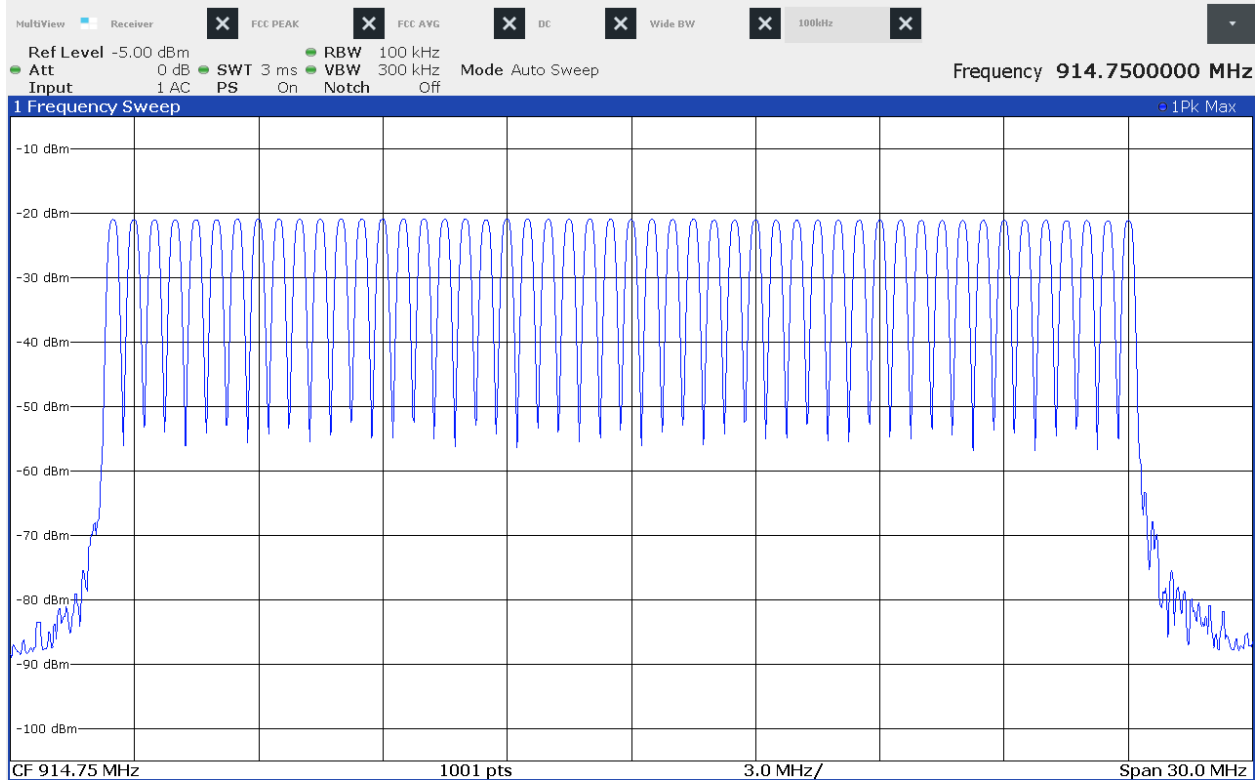
Test Setup Details	
Setup Format	Tabletop
Measurement Method	Antenna Conducted
Type of Test Site	Tabletop
Test Site Used	N/A
Type of Antennas Used	N/A
Notes	None

Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
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

Requirements
The system shall use at least 50 hopping frequencies.

Procedure
The antenna port of the EUT was connected to the spectrum analyzer through 20dB of attenuation. With the hopping function enabled, the EUT was allowed to transmit continuously. The Span was set to the frequency band of operation and adjusted to allow the individual channels to be clearly seen. The resolution bandwidth (RBW) was set to less than 30% of the channel spacing or the 20dB bandwidth, whichever is smaller. The video bandwidth (VBW) was set $\geq$ the RBW. The peak detector and 'Max-Hold' function were engaged. The span was set wide enough to capture the entire frequency band of operation. The EUT's signal was allowed to stabilize after multiple scans. The number of hopping frequencies was counted. The analyzer's display was plotted using a 'screen dump' utility.

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Hopping
Frequency Tested	N/A
Result	50 hopping frequencies
Notes	None



25. Time of Occupancy

EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Hopping

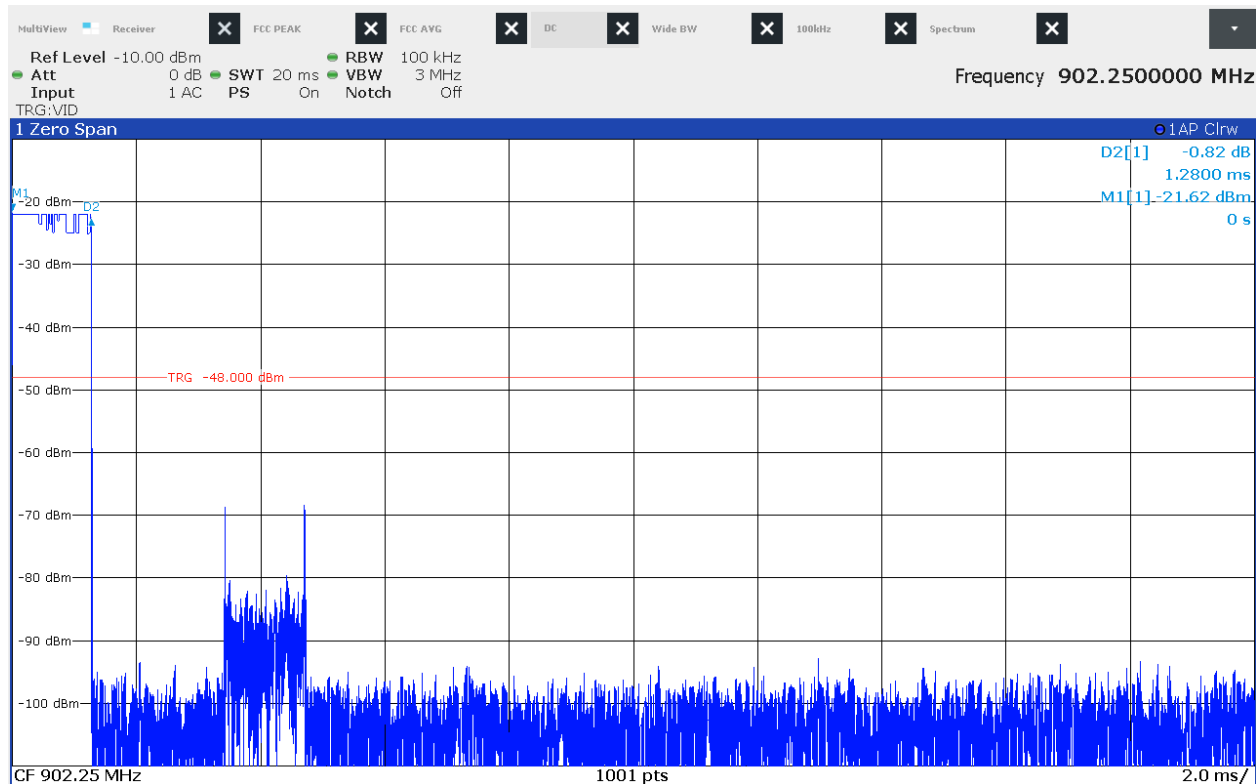
Test Setup Details	
Setup Format	Tabletop
Measurement Method	Antenna Conducted
Type of Test Site	Tabletop
Test Site Used	N/A
Type of Antennas Used	N/A
Notes	None

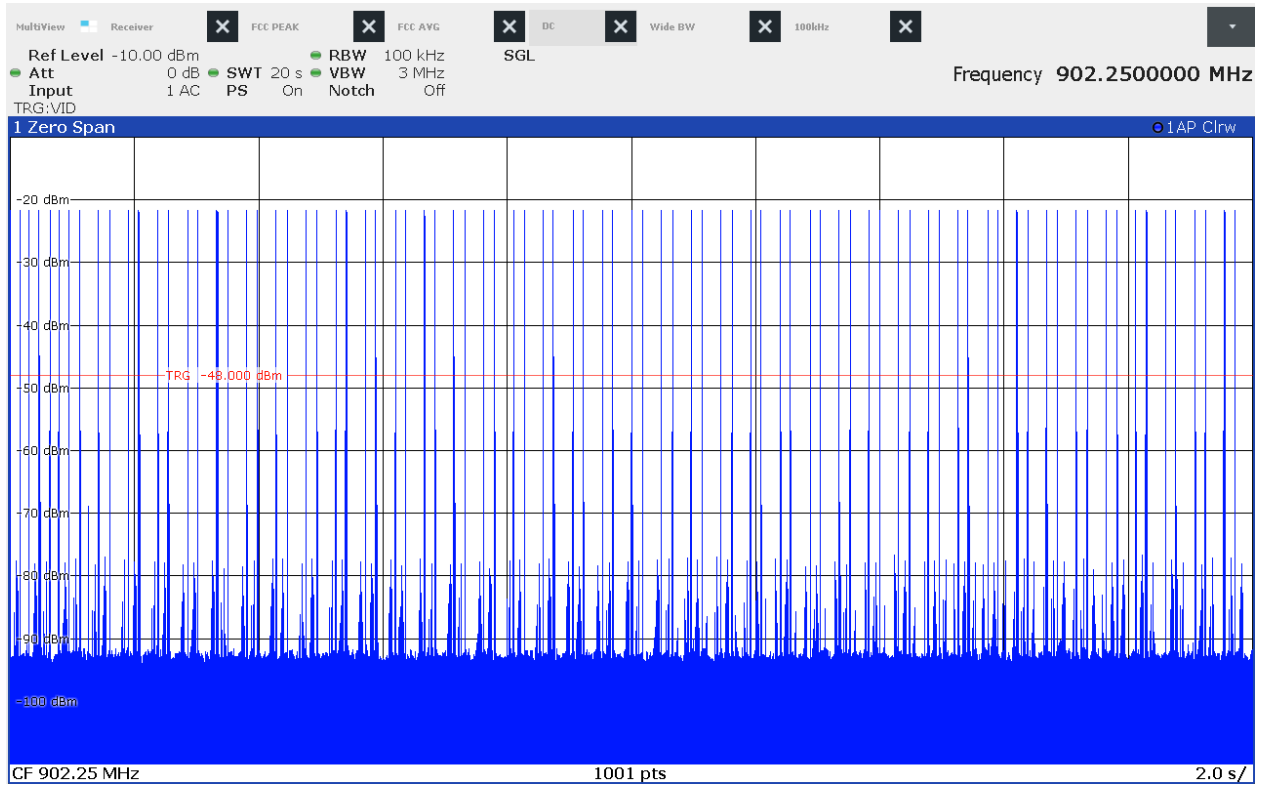
Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
Radiated disturbance (electric field strength on an open area test site or alternative test site) (30 MHz – 1000 MHz)	4.3
Radiated disturbance (electric field strength on an open area test site or alternative test site) (1 GHz – 6 GHz)	3.1

Requirements
The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period.

Procedure
The antenna port of the EUT was connected to the spectrum analyzer through 20dB of attenuation. With the hopping function enabled, the EUT was allowed to transmit continuously. The spectrum analyzer was set to zero span centered on a hopping channel. The resolution bandwidth (RBW) was set $\leq$ to the channel spacing. The sweep was set to capture the entire dwell time per hopping channel. The peak detector and 'Max-Hold' function were engaged. The analyzer's display was then screenshot and saved.

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Hopping
Frequency Tested	902.25MHz
Result	Ave. Time of Occupancy = 119.04ms 93 Pulses * 1.28ms = 119.04ms
Notes	None





26. Maximum Peak Conducted Output Power

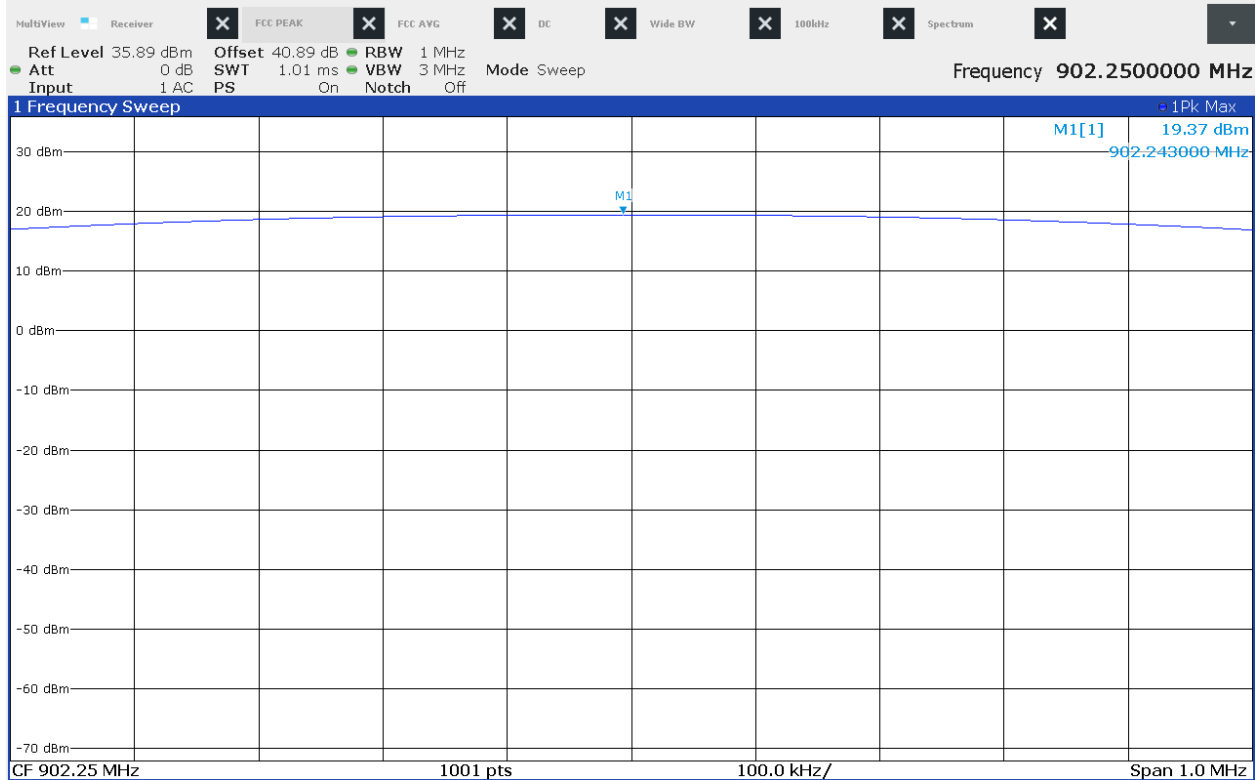
EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx

Test Setup Details	
Setup Format	Tabletop
Measurement Method	Antenna Conducted
Type of Test Site	Tabletop
Test Site Used	N/A
Notes	None

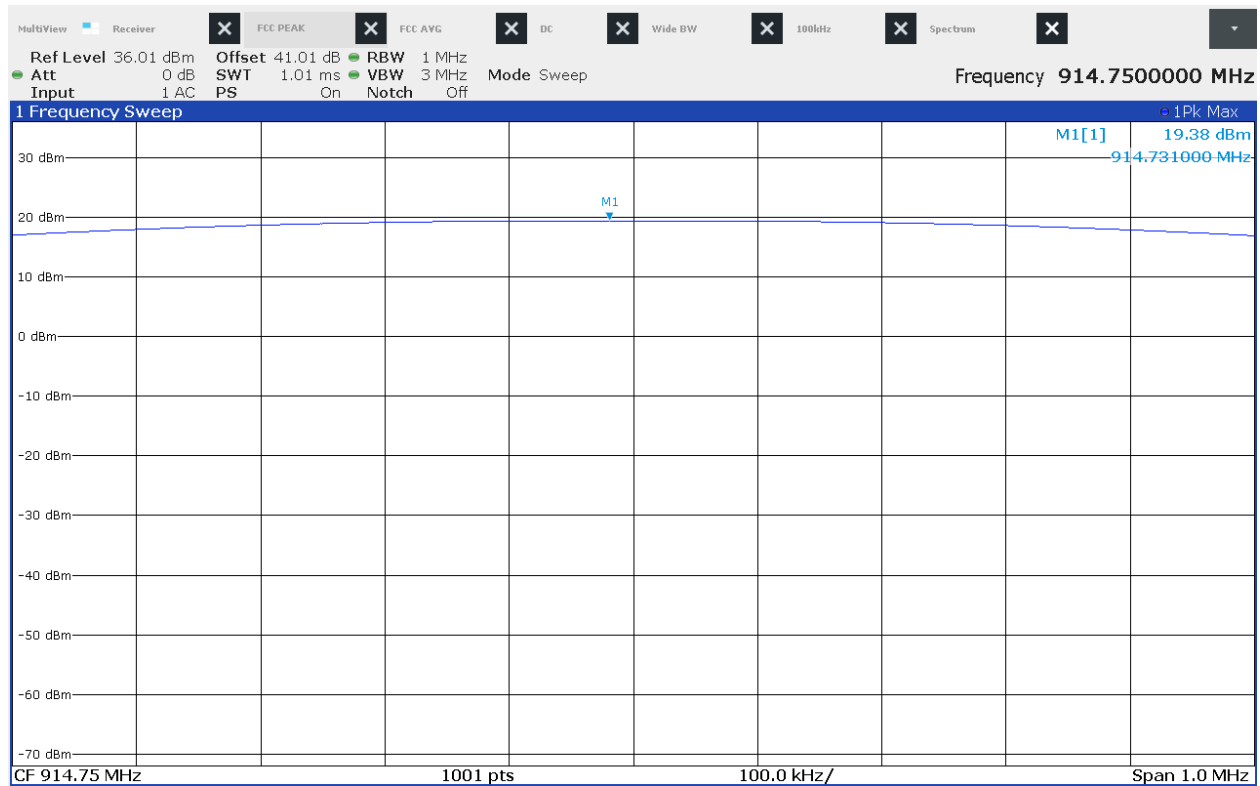
Requirements
The output power shall not exceed 1W (30dBm).

Procedure
The antenna port of the EUT was connected to a spectrum analyzer through 20dB of attenuation. With the hopping function disabled, the EUT was allowed to transmit continuously. The frequency hopping channel was set separately to low, middle, and high hopping channels. The resolution bandwidth (RBW) was set > the 20dB BW of the channel being measured. The video bandwidth (VBW) was set $\geq$ the RBW. The span was set to approximately five (5) times the 20dB bandwidth. A peak detector function was utilized. The 'Max-Hold' function was engaged. The analyzer was allowed to scan until the trace stabilized. The analyzer's peak search function was utilized to indicate the highest measured reading. The indicated level was corrected for the external 40dB of attenuation and cables. The analyzer's display was then screenshot and saved. The peak power output was recorded for the low, middle, and high hopping frequencies.

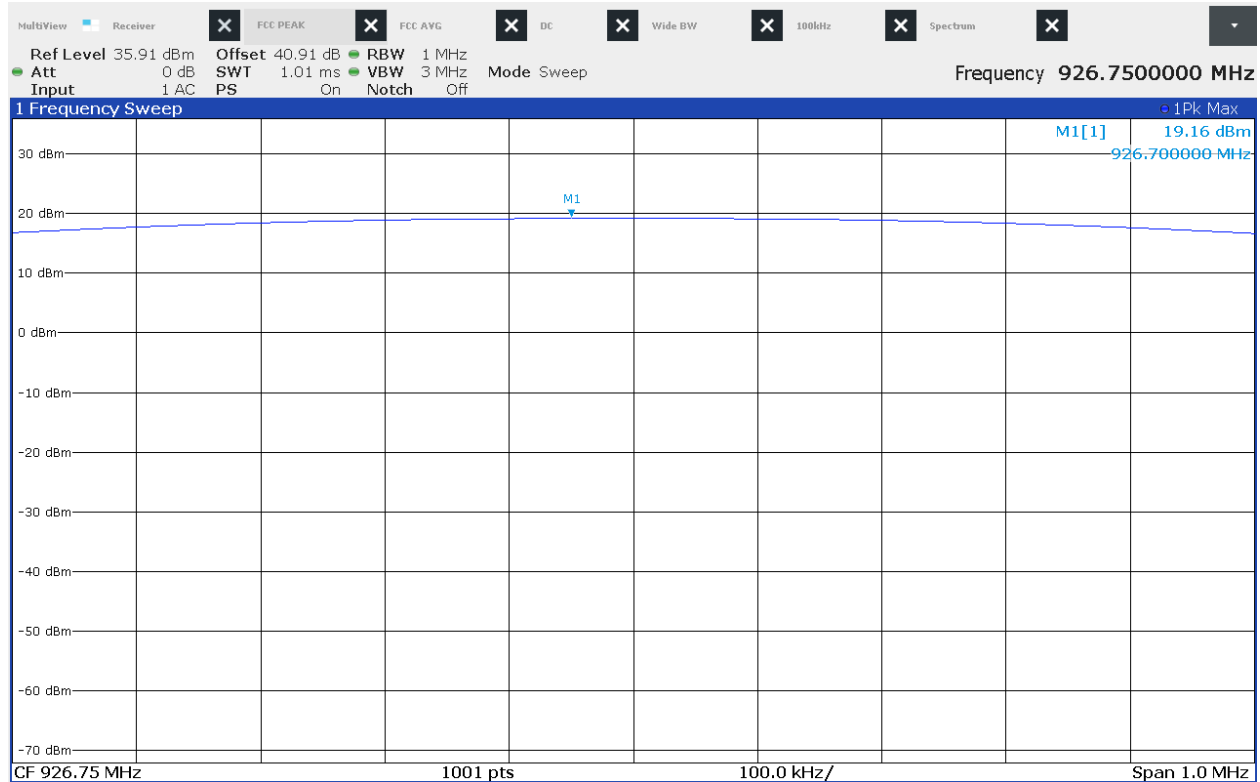
Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	902.25MHz
Result	Output Power = 86.50mW (19.37dBm)
Notes	None



Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	914.75MHz
Result	Output Power = 86.70mW (19.38dBm)
Notes	None



Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	N/A (Conducted Sample)
Mode	Continuous Tx
Frequency Tested	926.75MHz
Result	Output Power = 82.41mW (19.16dBm)
Notes	None



27. Effective Isotropic Radiated Power (EIRP)

EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx

Test Setup Details	
Setup Format	Tabletop
Measurement Method	Radiated
Type of Test Site	Semi-Anechoic Chamber
Test Site Used	Room #29
Type of Antennas Used	Below 1GHz: Bilog (or equivalent) Above 1GHz: Double-ridged waveguide (or equivalent)
Notes	None

Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
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

Requirements
The output power shall not exceed 4W (36dBm).

Procedure
The EUT was placed on the non-conductive stand and set to transmit. A bilog antenna was placed at a test distance of 3 meters from the EUT. The resolution bandwidth (RBW) of the spectrum analyzer was set to greater than the 20dB bandwidth. The span was set to approximately 5 times the 20 dB bandwidth. The EUT was maximized for worst case emissions (or maximum output power) at the measuring antenna. The maximum meter reading was recorded. The peak power output was measured for the low, middle, and high hopping frequencies. The equivalent power was determined from the field intensity levels measured at 3 meters using the substitution method. To determine the emission power, a dipole antenna (double ridged waveguide antenna for all measurements above 1GHz) was then set in place of the EUT and connected to a calibrated signal generator. The output of the signal generator was adjusted to match the received level at the spectrum analyzer. The signal level was recorded. The reading was then corrected to compensate for cable loss (and antenna gain for all measurements above 1GHz), as required. The peak power output was calculated for low, middle, and high hopping frequencies.

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Result	Max EIRP = 190.55mW (22.8dBm)
Notes	None

Freq (MHz)	Ant Pol	Wide BW Meter Reading (dBμV)	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)
902.25	H	88.9	1.5	26.5	0.0	117.0	21.7	36.0	-14.3
	V	89.7	1.5	26.5	0.0	117.7	22.4	36.0	-13.6
914.75	H	88.2	1.6	26.6	0.0	116.3	21.0	36.0	-15.0
	V	90.0	1.6	26.6	0.0	118.1	22.8	36.0	-13.2
926.75	H	86.8	1.6	26.9	0.0	115.2	19.9	36.0	-16.1
	V	89.3	1.6	26.9	0.0	117.7	22.4	36.0	-13.6

28. Transmitter Radiated Emissions

EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx

Test Setup Details	
Setup Format	Tabletop
Type of Test Site	Semi-Anechoic Chamber
Test Site Used	Room #29
Type of Antennas Used	Below 1GHz: Bilog (or equivalent) Above 1GHz: Double-Ridged Waveguide (or equivalent)
Notes	N/A

Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
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
Radiated disturbance (electric field strength on an open area test site or alternative test site) (18 GHz – 26.5 GHz)	3.3
Radiated disturbance (electric field strength on an open area test site or alternative test site) (26.5 GHz – 40 GHz)	3.4

Procedure

Radiated measurements were performed in a 32ft. x 20ft. x 14ft. high shielded enclosure. The shielded enclosure prevents emissions from other sources, such as radio and TV stations, from interfering with the measurements. All power lines 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.

Preliminary radiated emissions tests were 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 12.5GHz was investigated using a peak detector function.

The final open field emission tests were then manually performed over the frequency range of 30MHz to 12.5GHz

1) For all harmonics not in the restricted bands, the following procedure was used:

- a) The field strength of the fundamental was measured using a bilog antenna. The bilog antenna was positioned at a 3 meter distance from the EUT. The EUT was placed on an 80cm high non-conductive stand. A peak detector with a resolution bandwidth of 100 kHz was used on the spectrum analyzer.
- b) The field strengths of all of the harmonics not in the restricted band were then measured using a double-ridged waveguide antenna. The waveguide antenna was positioned at a 3 meter distance from the EUT. The EUT was placed on a 1.5 meter high non-conductive stand. A peak detector with a resolution bandwidth of 100kHz was used on the spectrum analyzer.
- c) To ensure that maximum or worst case emission levels at the fundamental and harmonics were measured, the following steps were taken when measuring the fundamental emissions and the spurious emissions:
 - i) The EUT was rotated so that all of its sides were exposed to the receiving antenna.
 - ii) Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
 - iii) The measuring antenna was raised and lowered for each antenna polarization to maximize the readings.
 - iv) In instances where it was necessary to use a shortened cable between the measuring antenna and the spectrum analyzer, the measuring antenna was not raised or lowered to ensure maximized readings. Instead, the EUT was rotated through all axis to ensure the maximum readings were recorded for the EUT.
- d) All harmonics not in the restricted bands must be at least 20dB below levels measured at the fundamental. However, attenuation below the general limits specified in §15.209(a) is not required.

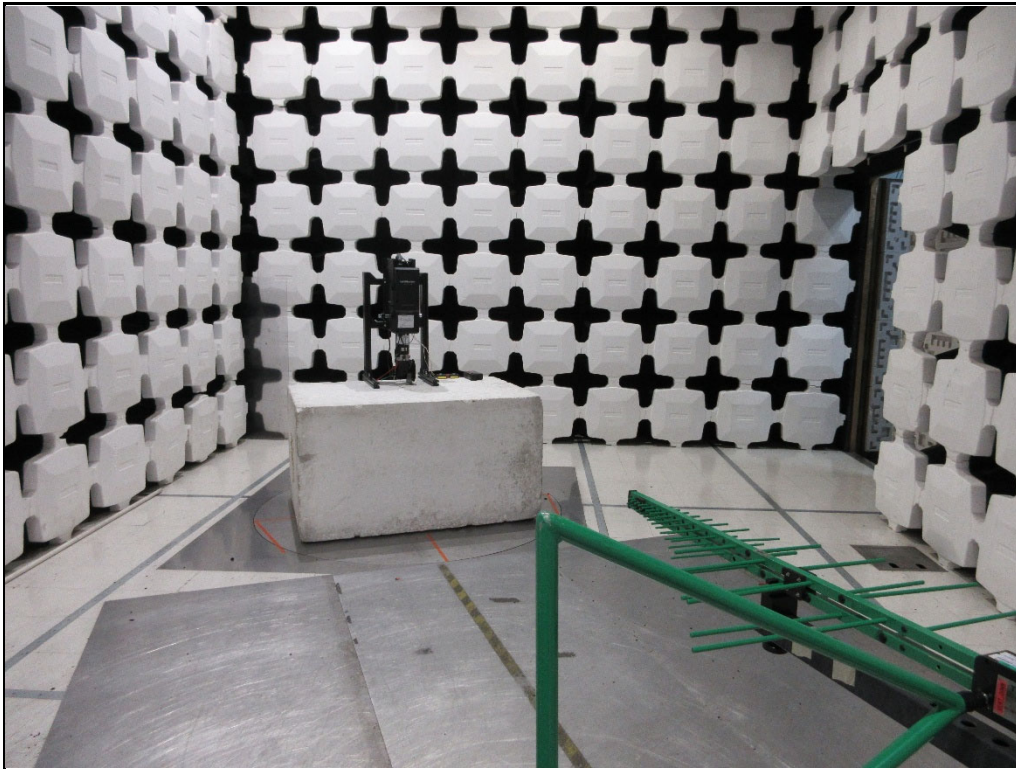
2) For all emissions in the restricted bands, the following procedure was used:

- a) The field strengths of all emissions below 1GHz were measured using a bi-log antenna. The bi-log antenna was positioned at a 3 meter distance from the EUT. The EUT was placed on an 80cm high non-conductive stand. A peak detector with a resolution bandwidth of 100 kHz was used on the spectrum analyzer.
- b) The field strengths of all emissions above 1GHz were measured using a double-ridged waveguide antenna. The waveguide antenna was positioned at a 3 meter distance from the EUT. The EUT was placed on a 1.5 meter high non-conductive stand. A peak detector with a resolution bandwidth of 1MHz was used on the spectrum analyzer.
- c) To ensure that maximum or worst case emission levels were measured, the following steps were taken when taking all measurements:
 - i) The EUT was rotated so that all of its sides were exposed to the receiving antenna.
 - ii) Since the measuring antenna is linearly polarized, both horizontal and vertical field components

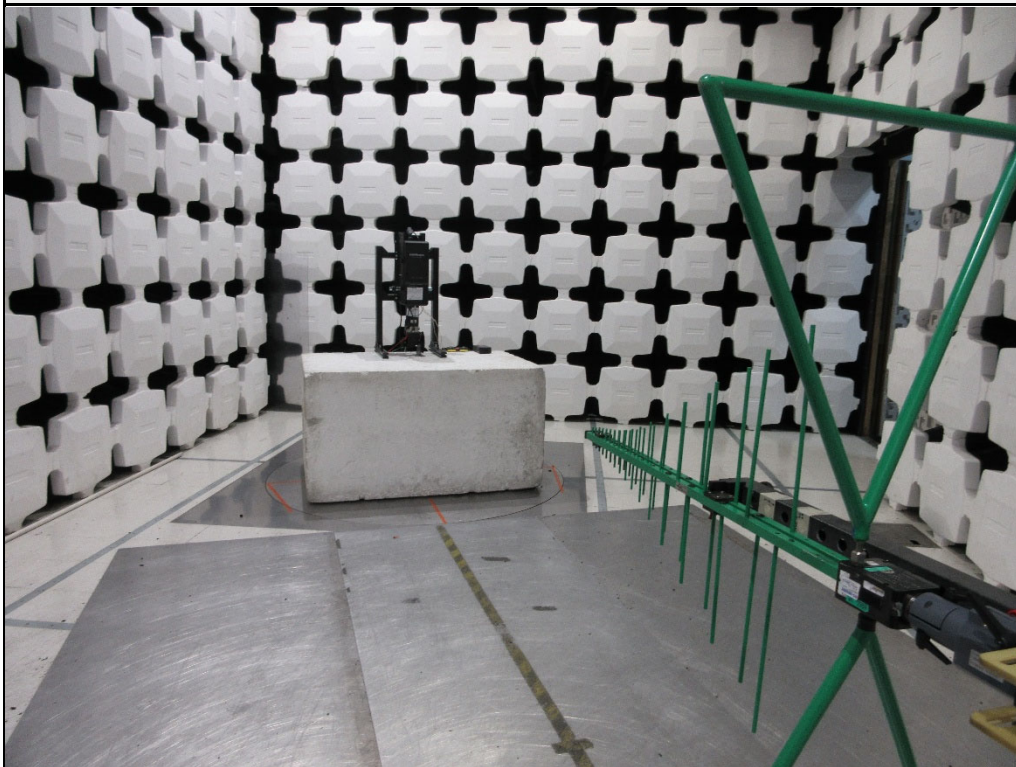
were measured.

- iii) The measuring antenna was raised and lowered for each antenna polarization to maximize the readings.
- iv) In instances where it was necessary to use a shortened cable between the measuring antenna and the spectrum analyzer, the measuring antenna was not raised or lowered to ensure maximized readings. Instead, the EUT was rotated through all axis to ensure the maximum readings were recorded for the EUT.
- d) For all radiated emissions measurements below 1GHz, if the peak reading is below the limits listed in §15.209(a), no further measurements are required. If, however, the peak readings exceed the limits listed in §15.209(a), then the emissions are remeasured using a quasi-peak detector.
- e) For all radiated emissions measurements above 1GHz, the peak readings must comply with the §15.35(b) limits. §15.35(b) states that when average radiated emissions measurements are specified, there also is a limit on the peak level of the radiated emissions. The limit on the peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. Therefore, all peak readings above 1GHz must be no greater than 20dB above the limits specified in §15.209(a).
- f) Next, for all radiated emissions measurements above 1GHz, the resolution bandwidth was set to 1MHz. The analyzer was set to linear mode with a 10Hz video bandwidth in order to simulate an average detector. An average reading was taken.

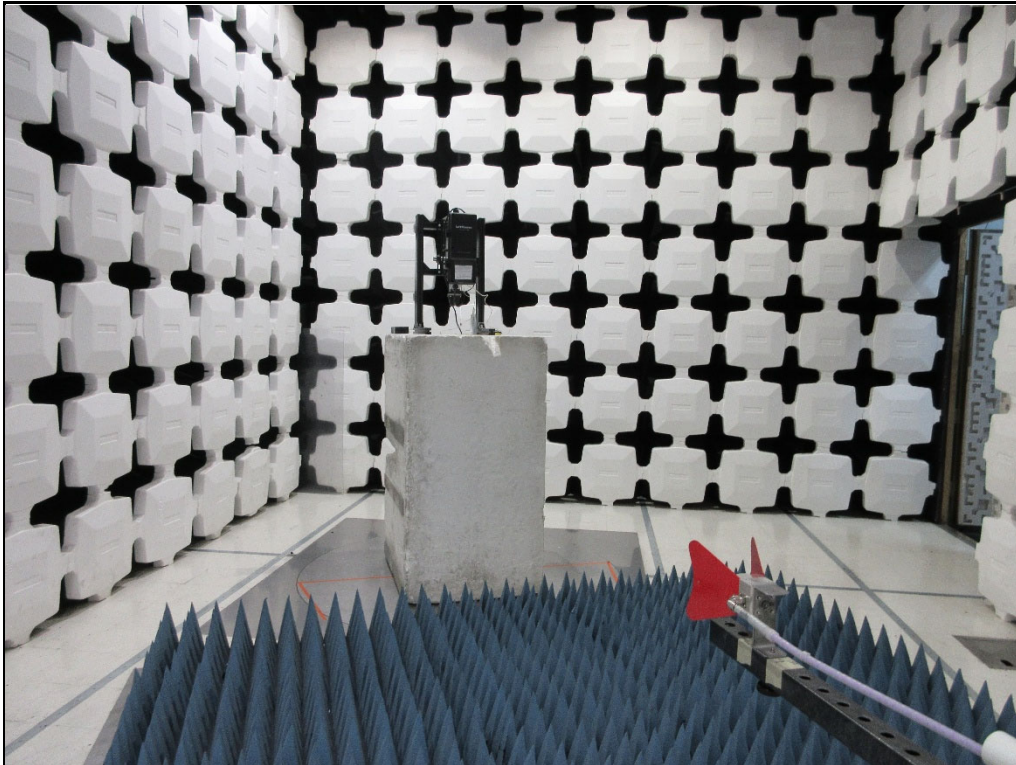
If the dwell time per channel of the hopping signal is less than 100msec, then the reading obtained with the 10Hz video bandwidth may be further adjusted by a duty cycle correction factor derived from $20 \cdot \log(\text{dwell time}/100\text{msec})$. These readings must be no greater than the limits specified in §15.209(a).



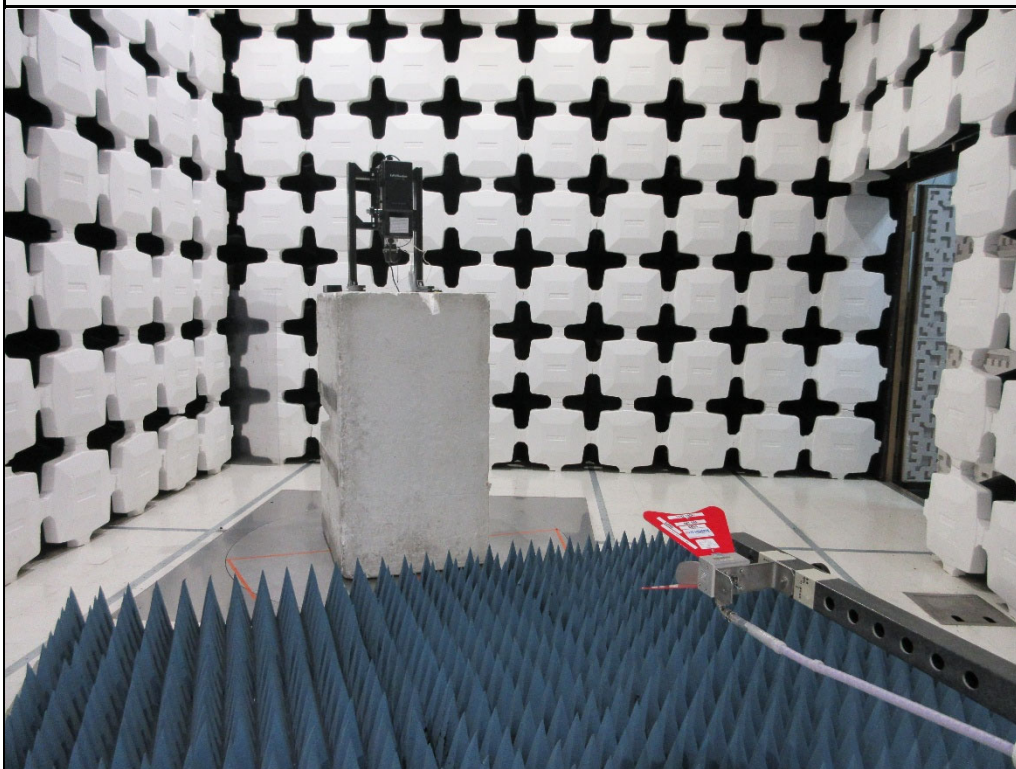
Test Setup for Spurious Radiated Emissions, 30MHz – 1GHz – Antenna
Polarization Horizontal



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



Test Setup for Spurious Radiated Emissions, Above 1GHz – Antenna Polarization Horizontal



Test Setup for Spurious Radiated Emissions, Above 1GHz– Antenna Polarization Vertical

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	902.25MHz
Notes	Peak Measurements in the Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total at 3m (dBμV/m)	Peak Total at 3m (μV/m)	Peak Limit at 3m (μV/m)	Margin (dB)
2706.75	H	60.4		2.8	32.9	-40.8	55.4	585.6	5000.0	-18.6
	V	57.9		2.8	32.9	-40.8	52.8	437.1	5000.0	-21.2
3609.00	H	53.7		3.2	33.6	-40.6	49.9	313.8	5000.0	-24.0
	V	54.9		3.2	33.6	-40.6	51.1	359.9	5000.0	-22.9
4511.25	H	50.0	*	3.6	34.4	-40.4	47.6	240.2	5000.0	-26.4
	V	49.7	*	3.6	34.4	-40.4	47.3	230.4	5000.0	-26.7
5413.50	H	50.4		3.9	35.2	-40.6	48.9	278.7	5000.0	-25.1
	V	51.2		3.9	35.2	-40.6	49.6	303.1	5000.0	-24.3
8120.25	H	49.3	*	4.9	36.4	-40.8	49.8	309.0	5000.0	-24.2
	V	48.9	*	4.9	36.4	-40.8	49.5	296.8	5000.0	-24.5
9022.50	H	48.4	*	4.9	36.8	-40.7	49.5	298.8	5000.0	-24.5
	V	48.8	*	4.9	36.8	-40.7	49.9	313.6	5000.0	-24.1

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	902.25MHz
Notes	Average Measurements in the Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle Factor (dB)	Average Total at 3m (dBμV/m)	Average Total at 3m (μV/m)	Average Limit at 3m (μV/m)	Margin (dB)
2706.75	H	58.50		2.8	32.9	-40.8	0.0	53.5	470.5	500.0	-0.5
	V	55.01		2.8	32.9	-40.8	0.0	50.0	314.8	500.0	-4.0
3609.00	H	49.40		3.2	33.6	-40.6	0.0	45.6	191.3	500.0	-8.3
	V	51.50		3.2	33.6	-40.6	0.0	47.7	243.6	500.0	-6.2
4511.25	H	38.84	*	3.6	34.4	-40.4	0.0	36.4	66.2	500.0	-17.6
	V	38.90	*	3.6	34.4	-40.4	0.0	36.5	66.6	500.0	-17.5
5413.50	H	42.00		3.9	35.2	-40.6	0.0	40.5	105.7	500.0	-13.5
	V	44.75		3.9	35.2	-40.6	0.0	43.2	145.1	500.0	-10.7
8120.25	H	38.28	*	4.9	36.4	-40.8	0.0	38.8	87.0	500.0	-15.2
	V	38.25	*	4.9	36.4	-40.8	0.0	38.8	86.7	500.0	-15.2
9022.50	H	37.76	*	4.9	36.8	-40.7	0.0	38.9	87.9	500.0	-15.1
	V	37.70	*	4.9	36.8	-40.7	0.0	38.8	87.3	500.0	-15.2

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	902.25MHz
Notes	Peak Measurements in Non-Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total at 3m (dBμV/m)	Peak Total at 3m (μV/m)	Peak Limit at 3m (μV/m)	Margin (dB)
902.25	H	88.78		1.5	26.5	0.0	116.8	695560.0	NA	NA
	V	89.64		1.5	26.5	0.0	117.7	767952.9	NA	NA
1804.50	H	74.77		2.2	30.8	-41.2	66.6	2140.9	76795.3	-31.1
	V	71.59		2.2	30.8	-41.2	63.4	1484.5	76795.3	-34.3
6315.75	H	38.37	*	4.3	35.6	-40.7	37.5	75.4	76795.3	-60.2
	V	37.68	*	4.3	35.6	-40.7	36.9	69.6	76795.3	-60.9
7218.00	H	44.77		4.6	36.2	-40.9	44.7	171.5	76795.3	-53.0
	V	43.63		4.6	36.2	-40.9	43.5	150.4	76795.3	-54.2

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	914.75MHz
Notes	Peak Measurements in the Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total at 3m (dBμV/m)	Peak Total at 3m (μV/m)	Peak Limit at 3m (μV/m)	Margin (dB)
2744.25	H	58.4		2.8	32.9	-40.7	53.4	466.8	5000.0	-20.6
	V	54.7		2.8	32.9	-40.7	49.7	305.2	5000.0	-24.3
3659.00	H	53.7		3.3	33.6	-40.6	50.0	315.0	5000.0	-24.0
	V	55.6		3.3	33.6	-40.6	51.9	394.2	5000.0	-22.1
4573.75	H	48.8	*	3.6	34.6	-40.4	46.6	212.7	5000.0	-27.4
	V	48.9	*	3.6	34.6	-40.4	46.7	215.7	5000.0	-27.3
7318.00	H	49.2	*	4.7	35.9	-40.9	48.8	276.0	5000.0	-25.2
	V	48.7	*	4.7	35.9	-40.9	48.4	263.3	5000.0	-25.6
8232.75	H	49.2	*	4.9	36.4	-40.8	49.8	307.8	5000.0	-24.2
	V	48.1	*	4.9	36.4	-40.8	48.6	270.6	5000.0	-25.3
9147.50	H	49.7	*	5.0	37.0	-40.6	51.0	355.5	5000.0	-23.0
	V	49.4	*	5.0	37.0	-40.6	50.7	343.8	5000.0	-23.3

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	914.75MHz
Notes	Average Measurements in the Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle Factor (dB)	Average Total at 3m (dBμV/m)	Average Total at 3m (μV/m)	Average Limit at 3m (μV/m)	Margin (dB)
2744.25	H	55.47		2.8	32.9	-40.7	0.0	50.5	334.7	500.0	-3.5
	V	51.10		2.8	32.9	-40.7	0.0	46.1	202.4	500.0	-7.9
3659.00	H	49.57		3.3	33.6	-40.6	0.0	45.9	196.9	500.0	-8.1
	V	51.55		3.3	33.6	-40.6	0.0	47.9	247.3	500.0	-6.1
4573.75	H	38.15	*	3.6	34.6	-40.4	0.0	35.9	62.3	500.0	-18.1
	V	38.10	*	3.6	34.6	-40.4	0.0	35.8	62.0	500.0	-18.1
7318.00	H	37.99	*	4.7	35.9	-40.9	0.0	37.7	76.4	500.0	-16.3
	V	38.19	*	4.7	35.9	-40.9	0.0	37.9	78.2	500.0	-16.1
8232.75	H	38.03	*	4.9	36.4	-40.8	0.0	38.6	84.9	500.0	-15.4
	V	38.02	*	4.9	36.4	-40.8	0.0	38.6	84.8	500.0	-15.4
9147.50	H	38.07	*	5.0	37.0	-40.6	0.0	39.4	93.3	500.0	-14.6
	V	38.76	*	5.0	37.0	-40.6	0.0	40.1	101.0	500.0	-13.9

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	914.75MHz
Notes	Peak Measurements in Non-Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total at 3m (dBμV/m)	Peak Total at 3m (μV/m)	Peak Limit at 3m (μV/m)	Margin (dB)
914.75	H	87.51		1.6	26.6	0.0	115.7	606665.4	NA	NA
	V	90.02		1.6	26.6	0.0	118.2	809933.2	NA	NA
1829.50	H	71.86		2.2	31.1	-41.2	64.0	1593.8	80993.3	-34.1
	V	67.23		2.2	31.1	-41.2	59.4	935.3	80993.3	-38.8
5488.50	H	42.44		3.9	35.2	-40.6	40.9	111.0	80993.3	-57.3
	V	45.12		3.9	35.2	-40.6	43.6	151.1	80993.3	-54.6
6403.25	H	38.82	*	4.3	35.6	-40.8	38.0	79.4	80993.3	-60.2
	V	38.92	*	4.3	35.6	-40.8	38.1	80.3	80993.3	-60.1

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	926.75MHz
Notes	Peak Measurements in the Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total at 3m (dBμV/m)	Peak Total at 3m (μV/m)	Peak Limit at 3m (μV/m)	Margin (dB)
2780.25	H	55.7		2.8	33.0	-40.7	50.8	347.1	5000.0	-23.2
	V	53.9		2.8	33.0	-40.7	49.0	280.9	5000.0	-25.0
3707.00	H	55.7		3.3	33.7	-40.6	52.0	399.9	5000.0	-21.9
	V	55.5		3.3	33.7	-40.6	51.8	390.3	5000.0	-22.2
4633.75	H	49.0	*	3.6	34.6	-40.4	46.8	218.4	5000.0	-27.2
	V	49.0	*	3.6	34.6	-40.4	46.8	218.7	5000.0	-27.2
7414.00	H	48.9	*	4.7	35.7	-40.9	48.4	262.6	5000.0	-25.6
	V	49.1	*	4.7	35.7	-40.9	48.6	269.6	5000.0	-25.4
8340.75	H	48.8	*	4.9	36.3	-40.8	49.3	291.4	5000.0	-24.7
	V	48.6	*	4.9	36.3	-40.8	49.0	283.5	5000.0	-24.9

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	926.75MHz
Notes	Average Measurements in the Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle Factor (dB)	Average Total at 3m (dBμV/m)	Average Total at 3m (μV/m)	Average Limit at 3m (μV/m)	Margin (dB)
2780.25	H	52.38		2.8	33.0	-40.7	0.0	47.4	235.8	500.0	-6.5
	V	49.08		2.8	33.0	-40.7	0.0	44.1	161.2	500.0	-9.8
3707.00	H	52.47		3.3	33.7	-40.6	0.0	48.8	276.6	500.0	-5.1
	V	52.25		3.3	33.7	-40.6	0.0	48.6	269.7	500.0	-5.4
4633.75	H	37.95	*	3.6	34.6	-40.4	0.0	35.8	61.5	500.0	-18.2
	V	38.01	*	3.6	34.6	-40.4	0.0	35.8	61.9	500.0	-18.1
7414.00	H	38.14	*	4.7	35.7	-40.9	0.0	37.7	76.5	500.0	-16.3
	V	38.30	*	4.7	35.7	-40.9	0.0	37.8	77.9	500.0	-16.1
8340.75	H	37.93	*	4.9	36.3	-40.8	0.0	38.4	83.4	500.0	-15.6
	V	38.17	*	4.9	36.3	-40.8	0.0	38.7	85.7	500.0	-15.3

Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	926.75MHz
Notes	Peak Measurements in Non-Restricted Bands

Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total at 3m (dBμV/m)	Peak Total at 3m (μV/m)	Peak Limit at 3m (μV/m)	Margin (dB)
926.75	H	86.79		1.6	26.9	0.0	115.2	576796.9	NA	NA
	V	89.30		1.6	26.9	0.0	117.7	770057.0	NA	NA
1853.50	H	75.95		2.3	31.4	-41.2	68.5	2645.5	77005.7	-29.3
	V	74.20		2.3	31.4	-41.2	66.7	2162.7	77005.7	-31.0
5560.50	H	41.08		4.0	35.1	-40.7	39.5	94.4	77005.7	-58.2
	V	43.09		4.0	35.1	-40.7	41.5	119.0	77005.7	-56.2
6487.25	H	40.07	*	4.3	35.6	-40.8	39.2	91.5	77005.7	-58.5
	V	38.74	*	4.3	35.6	-40.8	37.9	78.5	77005.7	-59.8
9267.50	H	39.26	*	5.0	37.1	-40.6	40.7	108.9	77005.7	-57.0
	V	39.30	*	5.0	37.1	-40.6	40.8	109.4	77005.7	-57.0

29. Band-Edge Compliance

EUT Information	
Manufacturer	The Chamberlain Group LLC
Product	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx Hopping

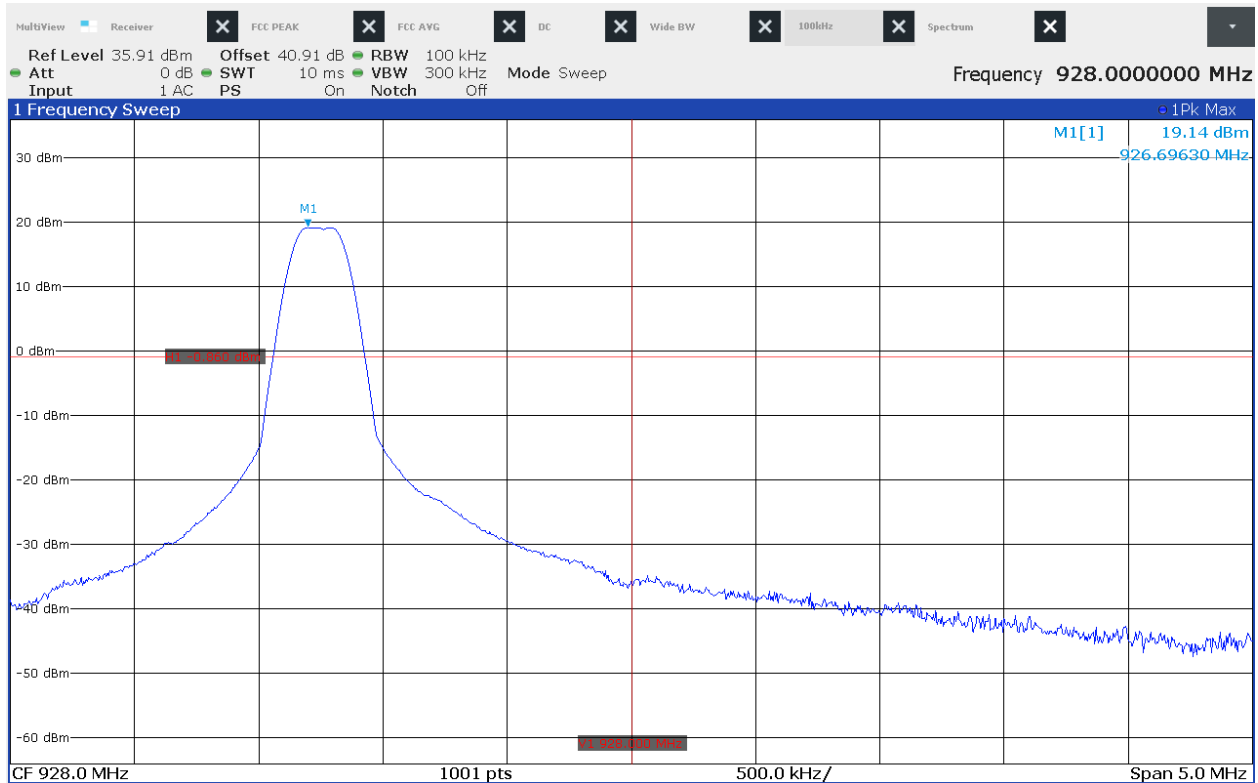
Test Setup Details	
Setup Format	Tabletop
Measurement Method	Antenna Conducted
Type of Test Site	Elite Test Bench
Type of Antennas Used	N/A
Notes	None

Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
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

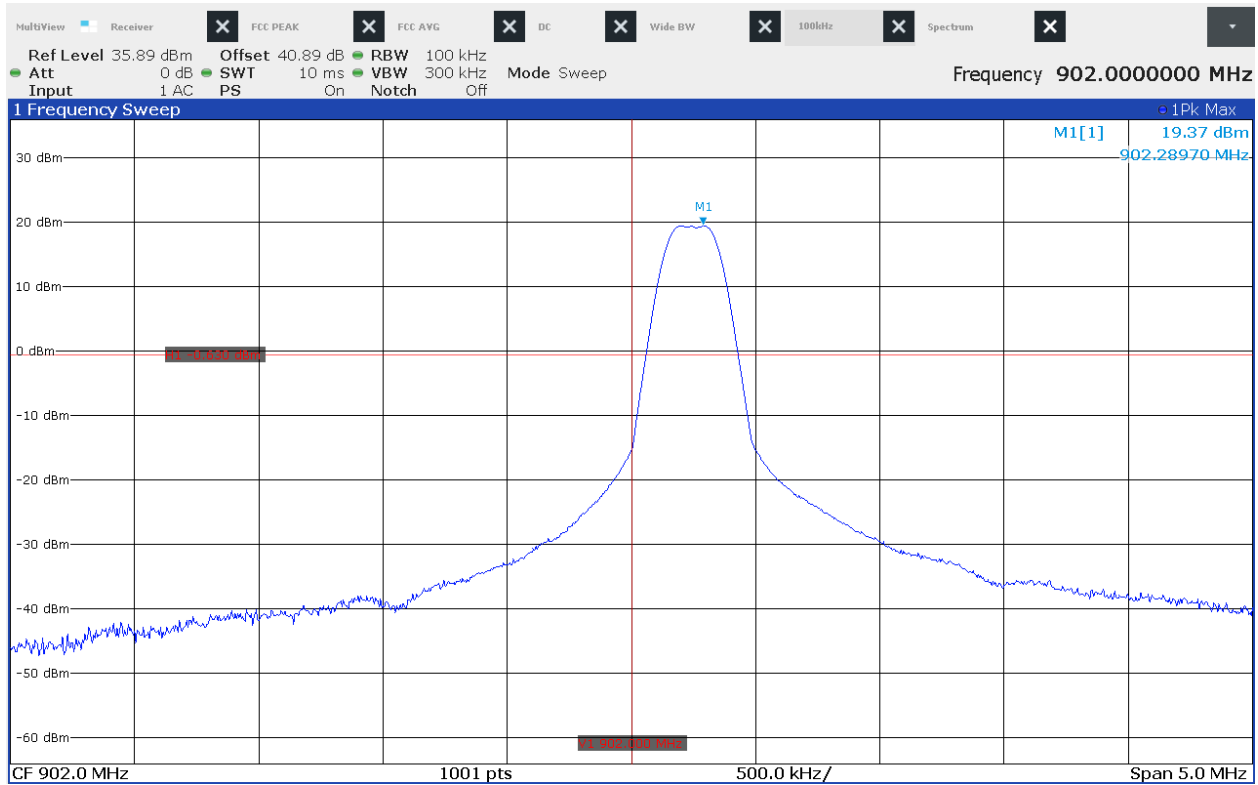
Procedure
1) Low Band Edge: - The antenna port of the EUT was connected to the spectrum analyzer through 40dB of attenuation. - The EUT was set to transmit continuously at the channel closest to the low band-edge with the hopping function disabled. - To determine the band edge compliance, the following spectrum analyzer settings were used: - Center Frequency = 902MHz (low band-edge frequency). - Span = Wide enough to capture the peak level of the emission operating on the channel closest to the band-edge, as well as any modulation products which fall outside of the authorized band of operation. - Resolution Bandwidth (RBW) = $\geq 1\%$ of the span. 'Max-Hold' function was engaged. - The analyzer was allowed to scan until the envelope of the transmitter bandwidth was defined. - The marker was set on the peak of the in-band emissions. A display line was placed 20dB down from the peak of the in-band emissions. All emissions which fall outside of the authorized band of operation must be below the 20dB down display line. (All emissions to the left of the center frequency (band-edge) must be below the display line.) - The analyzer's display was then screenshot and saved. - Steps (d) through (f) were repeated with the frequency hopping function enabled. 2) High Band Edge: - The antenna port of the EUT was connected to the spectrum analyzer through 20dB of attenuation.

- b) The EUT was set to transmit continuously at the channel closest to the high band-edge hopping function disabled).
- c) To determine the band edge compliance, the following spectrum analyzer settings were used:
 - o Center Frequency = 928MHz (high band-edge frequency).
 - o Span = Wide enough to capture the peak level of the emission operating on the channel closest to the band-edge, as well as any modulation products which fall outside of the authorized band of operation.
 - o Resolution Bandwidth (RBW) = $\geq 1\%$ of the span.
 - o 'Max-Hold' function was engaged.
- d) The analyzer was allowed to scan until the envelope of the transmitter bandwidth was defined.
- e) The marker was set on the peak of the in-band emissions. A display line was placed 20dB down from the peak of the in-band emissions. All emissions which fall outside of the authorized band of operation must be below the 20dB down display line. (All emissions to the left of the center frequency (band-edge) must be below the display line.)
- f) The analyzer's display was then screenshot and saved.
- g) Steps (d) through (f) were repeated with the frequency hopping function enabled.

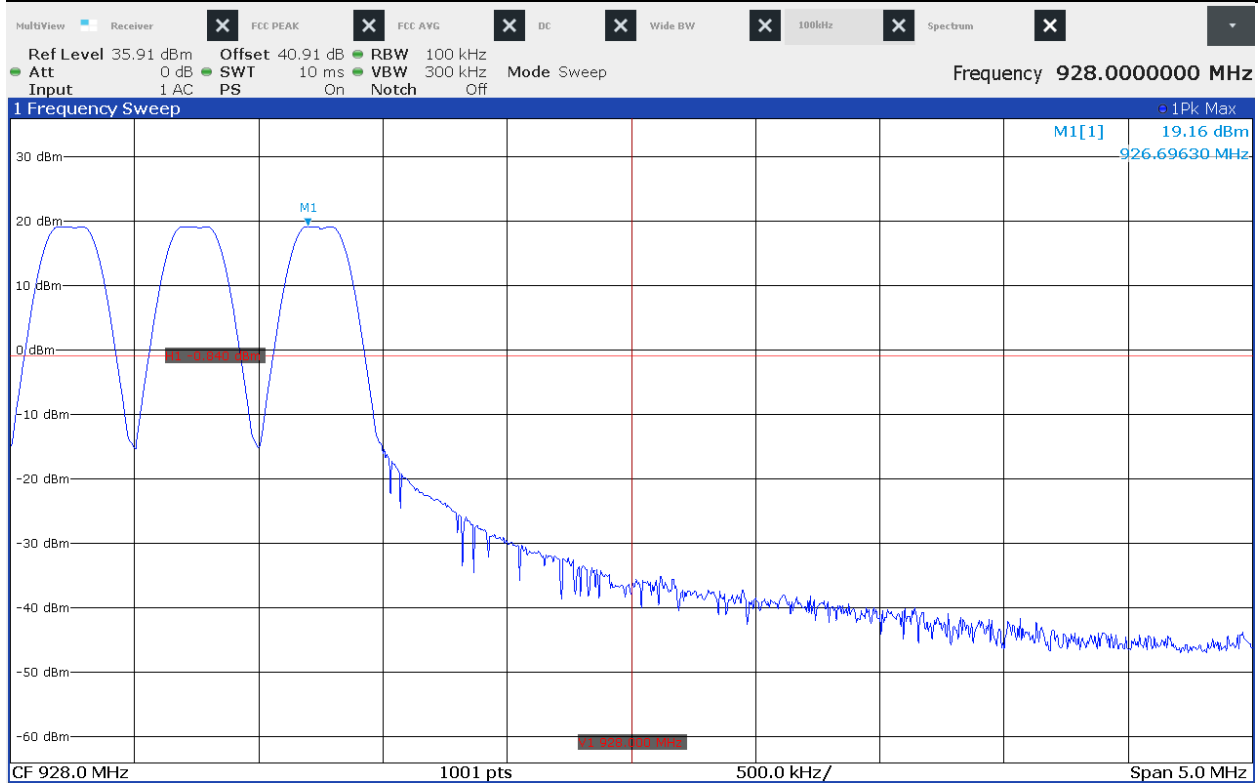
Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	928MHz
Notes	High Band Edge



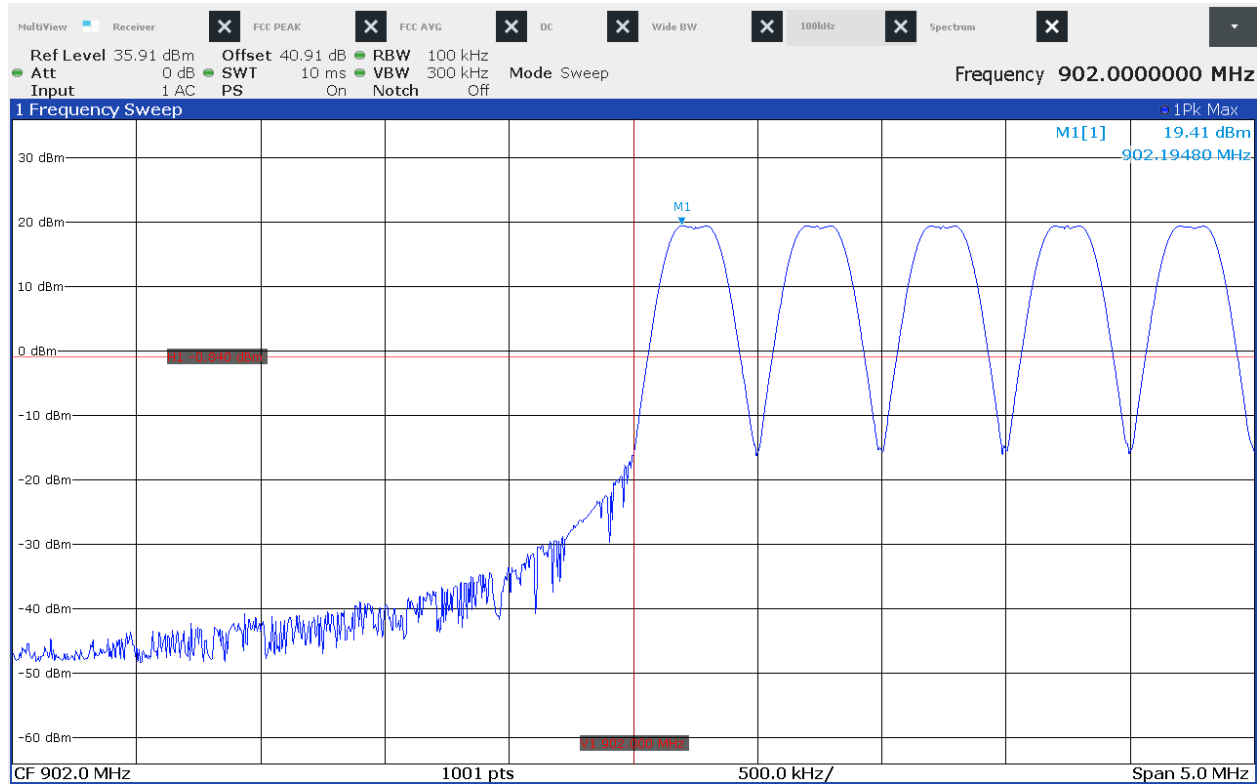
Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	902MHz
Notes	Low Band Edge



Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Hopping
Frequency Tested	928MHz
Notes	High Band Edge – Hopping



Test Details	
Manufacturer	The Chamberlain Group LLC
EUT	Jackshaft with Release, 700lb, 120/240V
Model No.	RJDC7S1BER
Serial No.	262264610020
Mode	Continuous Tx
Frequency Tested	902MHz
Notes	Low Band Edge – Hopping



30. Scope of Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELITE ELECTRONIC ENGINEERING, INC.
1516 Centre Circle
Downers Grove, IL 60515
Robert Bugielski (QA Manager) Phone: 630 495 9770 ext. 168
Email: rbugielski@elitetest.com
Craig Fanning (EMC Lab Manager) Phone: 630 495 9770 ext. 112
Email: cfanning@elitetest.com
Brandon Lugo (Automotive Team Leader) Phone: 630 495 9770 ext. 163
Email: blugo@elitetest.com
Richard King (FCC/Commercial Team Leader) Phone: 630 495 9770 ext. 123
Email: reking@elitetest.com
Website: www.elitetest.com

ELECTRICAL

Valid To: June 30, 2027

Certificate Number: 1786.01

In recognition of the successful completion of the A2LA Accreditation Program evaluation process, accreditation is granted to this laboratory at the location listed above, as well as the satellite location listed below, to perform the following automotive electromagnetic compatibility and other electrical tests:

Test Technology:**Test Method(s)¹:**

Transient Immunity
(Max Voltage 1500 V/Max current 1000 A)

ISO 7637-2 (including emissions); ISO 7637-3; ISO 7637-4;
ISO 16750-2, Sections 4.6.3 and 4.6.4;
ISO 21498-1; ISO 21498-2;
CS.00054, Section 5.9; CS.00244 Section 5.2.15 through 5.2.21; CS.00245; CS.00246 Section 5.2.4;
EMC-CS-2009.1 (CI220); FMC1278 (CI220, CI221, CI222);
GMW 3097, Section 3.5; SAE J1113-11; SAE J1113-12;
ECE Regulation 10.06 Annex 10

Electrostatic Discharge (ESD)
(Up to +/-25 kV)

ISO 10605 (2001, 2008); ISO 10605;
CS.00054, Section 5.10; CS.00244 Section 5.5;
EMC-CS-2009.1 (CI 280); FMC1278 (CI280); SAE J1113-13;
GMW 3097 Section 3.6

Conducted Emissions

CISPR 25 (2002, 2008), Sections 6.2 and 6.3;
CISPR 25 (2016), Sections 6.3 and 6.4; CISPR 25;
CS.00054, Sections 5.6.1 and 5.6.2;
CS.00244 Sections 5.4.2 and 5.4.3; GMW 3097, Section 3.3.2;
EMC-CS-2009.1 (CE 420); FMC1278 (CE420, CE421, CE 430, CE440)

(A2LA Cert. No. 1786.01) 08/14/2025



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5202 Presidents Court, Suite 220 | Frederick, MD 21703-8398 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2LA.org