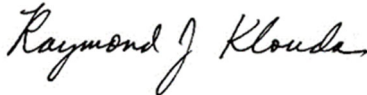




Engineering Test Report No. 2502441-02

Report Date	August 18, 2026	
Manufacturer Name	Industrial Scientific Corporation	
Manufacturer Address	1 Life Way Pittsburgh, PA 15205	
Equipment Under Test Model No.	1 Unit Tectra Charger 18109768	
Date Received	July 8, 2026	
Test Dates	July 8, 2026 – July 22, 2026	
Specifications	FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.207 FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.209 Innovation, Science, and Economic Development Canada, RSS-GEN Innovation, Science, and Economic Development Canada, RSS-102 Innovation, Science, and Economic Development Canada, RSS-210	
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	Kevin Gainer	Jack Gallet
Signature		
Approved by	Raymond J. Klouda, Registered Professional Engineer of Illinois – 44894	
PO Number	D954320	

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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 EUT on the test dates specified. Any electrical or mechanical modifications 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 A2LA, NIST, or any agency of the Federal Government.

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1. Report Revision History

Revision	Date	Description
–	19 AUG 2026	Initial Release of Engineering Test Report No. 2502440-02

2. Introduction

2.1. Scope of Tests

This document presents the results of a series of RF emissions tests that were performed on one (1) Industrial Scientific Corporation 1 Unit Tectra Charger (hereinafter referred to as the Equipment Under Test (EUT)). The EUT was manufactured and submitted for testing by Industrial Scientific Corporation located in Pittsburgh, PA.

2.2. Purpose

The test series was performed to determine if the EUT meets the RF emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, §15.107 and §15.109 for Receivers and Subpart C, §15.247 for a Digital Modulation intentional radiator operating within the 2400 – 2483.5MHz band.

The test series was also performed to determine if the EUT meets 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 Digital Modulation intentional radiator operating within the 2400 – 2483.5MHz band.

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

2.3. Identification of the EUT

The EUT was identified as follows:

EUT Identification	
Equipment Under Test Description	1 Unit Tectra Charger
Model No.	18109768
Serial No.	26050100091-02
Software/Firmware Version	1.0.10
Device Type	Wireless Charger
Band of Operation	80 – 300 kHz
Antenna Type	H Field Loop

The EUT listed above was used throughout the test series.

3. Power Input

The EUT was powered by 12 V DC from a GlobTek, Inc., Model No. GTM46402-3612, AC/DC power adapter. The power adapter received 120V 60Hz power through lowpass powerline filters on the wall of the shielded enclosure.

4. Grounding

The EUT was not connected to ground.

5. Support Equipment

The EUT was submitted for testing along with the following support equipment:

Description	Model #	S/N
Tectra iX5 Monitor	18109733	2505550-001
GlobTek AC/DC Power Adapter	GTM46402-3612	WR9QE3000CCPN

6. Interconnect Leads

The following interconnect cables were submitted with the EUT:

Item	Description
Power Cable	Powers the EUT with 12 V DC from a GlobTek AC/DC Power Adapter

7. Modifications Made to the EUT

No modifications were made to the EUT during the testing.

8. Modes of Operation

The EUT and all peripheral equipment were energized. The unit was programmed to transmit in one of the following modes:

Mode	Description
Qi	A Tectra iX5 Monitor was placed on the EUT and was allowed to charge through the EUT. In this state, the EUT constantly transmits at 128.5kHz. The Tectra iX5 Monitor was powered on but not permitted to transmit.
Multi-Tx	While the charger is operating, a monitor capable of BLE transmission may be operational while charging. A Textra iX5 Monitor was placed on the EUT and was allowed to charge through the EUT. In this state, the EUT constantly transmits at 128.5kHz. The Tectra iX5 monitor was configured to transmit at 2440MHz BLE simultaneously.

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"
- 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"
- RSS-210 Issue 11, June 2024, "License-Exempt Radio Apparatus: Category I Equipment"

- RSS-102 Issue 6, December 2023, "Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)"
- RSS-102.NS.MEAS Issue 1, December 2023, "Measurement Procedure for Assessing Nerve Stimulation (NS) Compliance in Accordance with RSS-102"

10. Test Plan

The Tectra Test inst 7_8_26 (07/08/2026) test plan was provided by Industrial Scientific Corporation and was referenced during the testing.

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	24.7°C
Relative Humidity	45%
Atmospheric Pressure	1018mb

13. Summary

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

Test Description	Requirements	Test Method	S/N	Results
Transmitter Conducted Emissions (AC Mains)	FCC 15.207 ICES-003	ANSI C63.10:2020 +Cor.1+C63.10a	26050100091-02	Conforms
Transmitter Radiated Emissions	FCC 15.209 ISED RSS-210	ANSI C63.10:2020 +Cor.1+C63.10a	26050100091-02	Conforms
Nerve Stimulation	ISED RSS-102	ANSI C63.10:2020 +Cor.1+C63.10a	26050100091-02	Conforms

Note 1: Per the FCC "Code of Federal Regulations" Title 47, Subchapter A, Part 15, Subpart B, Section 15.101(b), receivers operating above 960MHz are exempt from complying with the technical provisions of §15.5.

14. Sample Calculations

For Powerline Conducted Emissions:

The resultant voltage level (VL) is a summation in decibels (dB) of the receiver meter reading (MTR) and the cable loss factor (CF).

$$\text{Formula 1: } VL \text{ (dB}\mu\text{V)} = \text{MTR (dB}\mu\text{V)} + \text{CF (dB)}.$$

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.

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

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.

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

15. Statement of Conformity

The Industrial Scientific Corporation 1 Unit Tectra Charger, Model No. 18109768, Serial No. 26050100091-02, did fully conform to the selected requirements of FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.207, FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.209, Innovation, Science, and Economic Development Canada, RSS-102, Innovation, Science, and Economic Development Canada, RSS-210 and Innovation, Science, and Economic Development Canada, RSS-GEN.

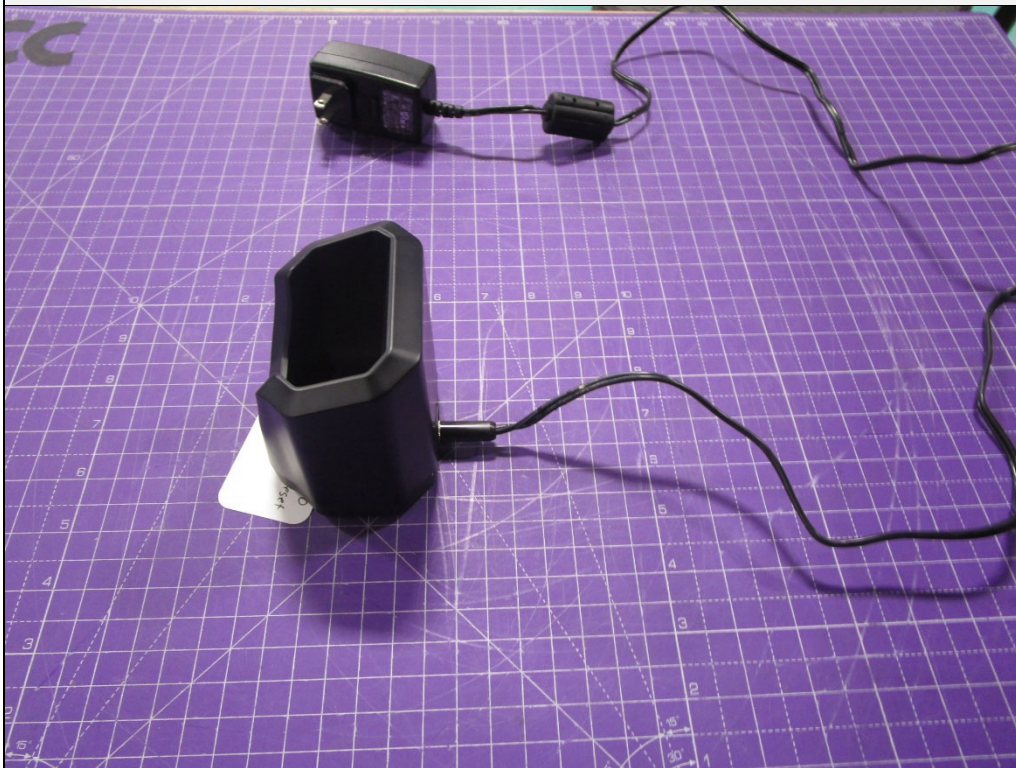
16. Certification

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 15.207, FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.209, Innovation, Science, and Economic Development Canada, RSS-102, Innovation, Science, and Economic Development Canada, RSS-210, and Innovation, Science, and Economic Development Canada, RSS-GEN test specifications. The data presented in this test report pertains to the EUT as received by the customer on the test date specified. Any electrical or mechanical modifications made to the EUT subsequent to the specified test date will serve to invalidate the data and void this certification.

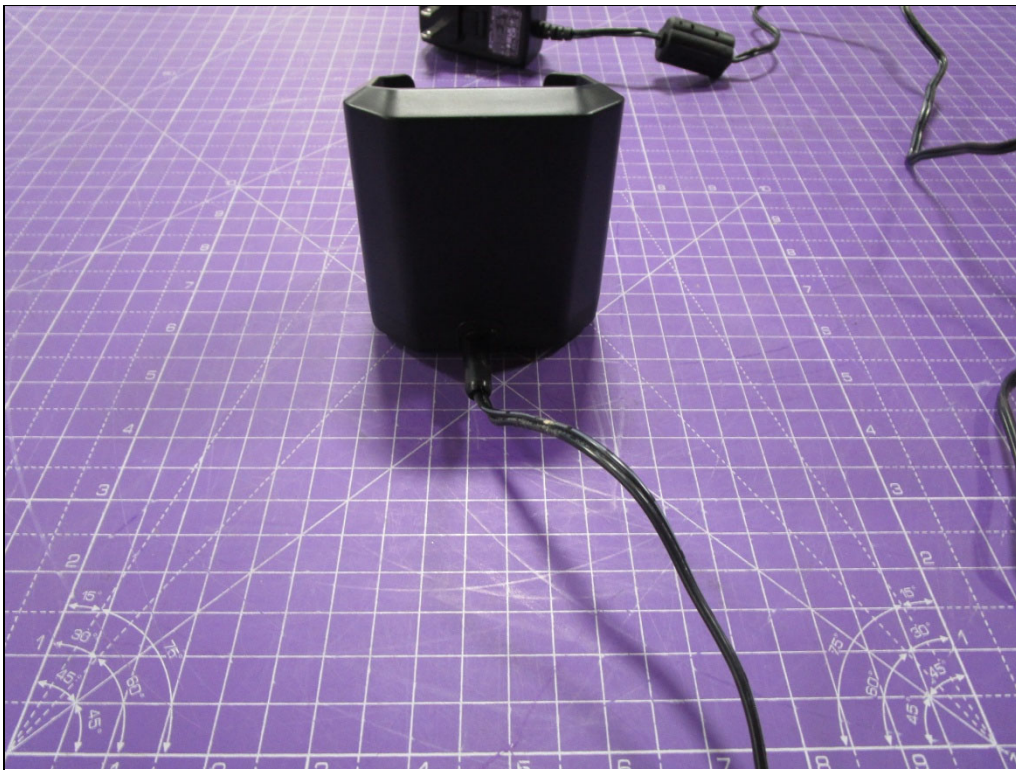
17. Photographs of EUT



18109768 – Front



18109768 – Side



18109768 – Back



18109768 – Tectra iX5 Monitor Installed

18. Equipment List

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Due Date
CDM5	Lab Computer	ELITE		---	---	N/A	
CDM6	Lab Computer	ELITE		---	---	N/A	
CLT35	LAPTOP	HP	PROBOOK ELITE			N/A	
GRB0	1MHZ, LISN SIGNAL CHECKER	Elite	LISNCHKR1M	1	1MHZ	2/11/2025	2/11/2027
MEA0	MICRO-OHM METER	KEITHLEY	580	674866	10UOHM-200KOHM	10/17/2025	10/17/2026
NLC2	5" LOOP ANTENNA	EMCO	7603	9907-2217	0.03-50KHZ	NOTE 1	
NLP0	TEST LOOP ANTENNA	GENERAL RADIO	1000P10	799	0.01-30MHZ	NOTE 1	
NLS0	24" ACTIVE LOOP ANTENNA	EMCO	6502	00089979	10KHZ-30MHZ	2/27/2026	2/27/2028
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
PLF2	CISPR16 50UH LISN	Elite	CISPR16/70A	002	150kHz-30MHz	6/26/2026	6/26/2027
PLF4	CISPR16 50UH LISN	Elite	CISPR16/70A	004	150kHz-30MHz	6/26/2026	6/26/2027
R29F	3M ANECHOIC CHAMBER NSA	EMC TEST SYSTEMS	3M ANECHOIC		30MHZ-18GHZ	6/1/2025	6/1/2027
RBG2	EMI Analyzer	Rohde & Schwarz	ESW44	101591	2HZ-44GHZ	12/12/2025	12/12/2026
RBJ3	EMI Analyzer	Rohde & Schwarz	ESW8	100984	2Hz-8GHz	5/17/2026	5/17/2027
T1E14	Attenuator	WEINSCHL	46-10-43	CM5690	DC-18GHz, 10dB, 25W	12/26/2025	12/26/2027
TTC0	Attenuator	WEINSCHL	47-30-43	AZ0513	DC-18GHz, 30dB, 50W	12/22/2025	12/22/2027
VBR8	COMMERCIAL CONDUCTED EMISSIONS.EXE	ELITE				N/A	
VBV2	COMMERCIAL RADIATED EMISSIONS.EXE	ELITE		---	---	N/A	
WKA1	SOFTWARE, UNIVERSAL RCV EMI	ELITE	UNIV_RCV_EMI	1	---	I/O	
SES0	24VDC POWER SUPPLY	P-TRANS	FS-32024-1M	001	18-27VDC	NOTE 1	

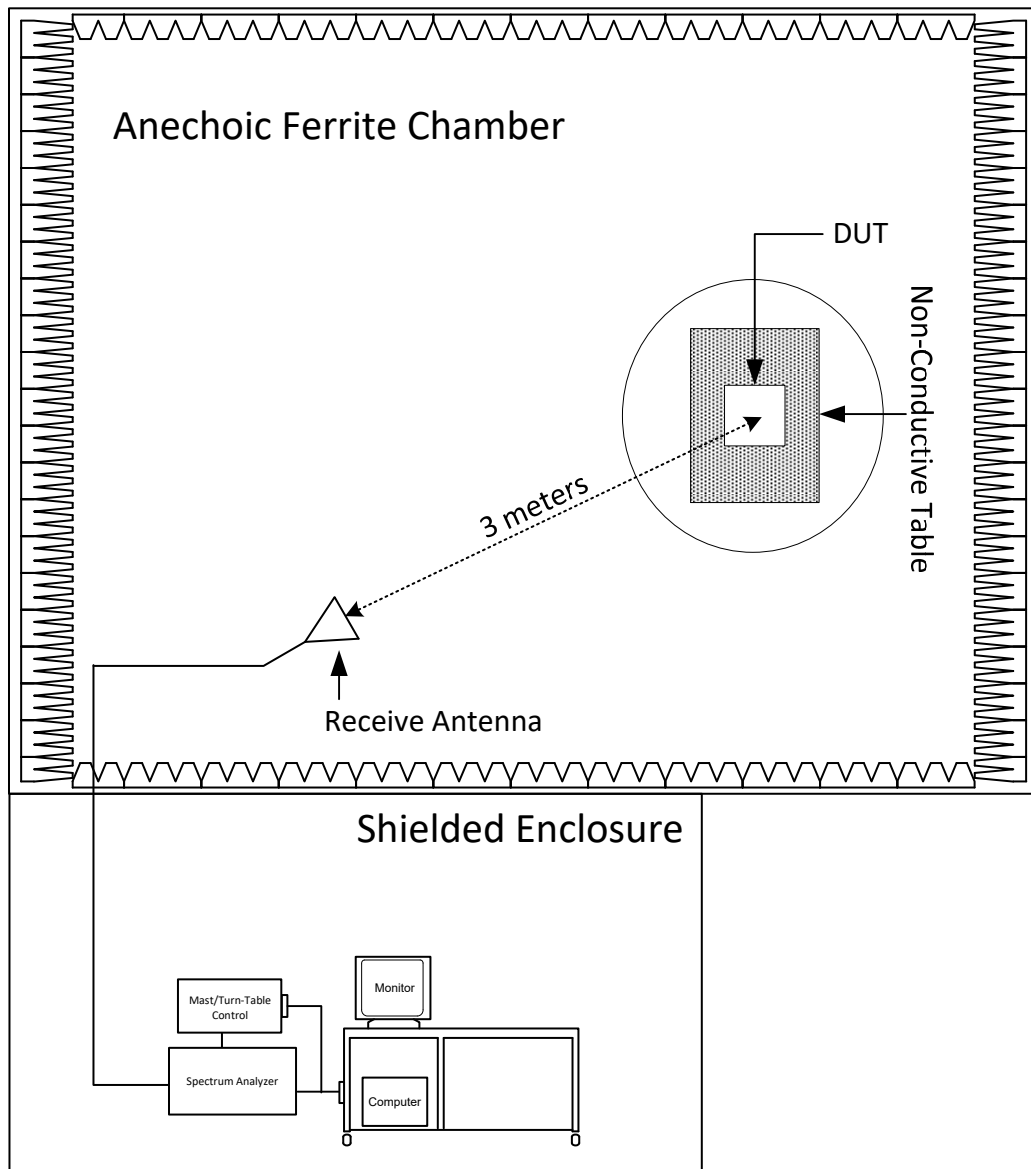
N/A: Not Applicable

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. Transmitter Conducted Emissions (AC Mains)

Test Information	
Manufacturer	Industrial Scientific Corporation
Equipment Under Test	1 Unit Tectra Charger
Model No.	18109768
Serial No.	26050100091-02
Mode	Qi

Test Setup Details	
Setup Format	Tabletop
Measurement Method	Conducted (LISN)
Type of Test Site	Shielded Enclosure
Test Site Used	R23P
Notes	None

Measurement Uncertainty	
Measurement Type	Expanded Measurement Uncertainty
Conducted disturbance (mains port) (150 kHz – 30 MHz)	2.7

Requirements
All radio frequency voltages on the power lines for any frequency or frequencies of an intentional radiator shall not exceed the limits in the following table:

Conducted Emissions Limits		
Frequency of Emission (MHz)	Conducted Limits (dB μ V)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56-46*
0.5 – 5	56	46
5 – 30	60	50
* The lower limit shall apply at the transition frequencies.		

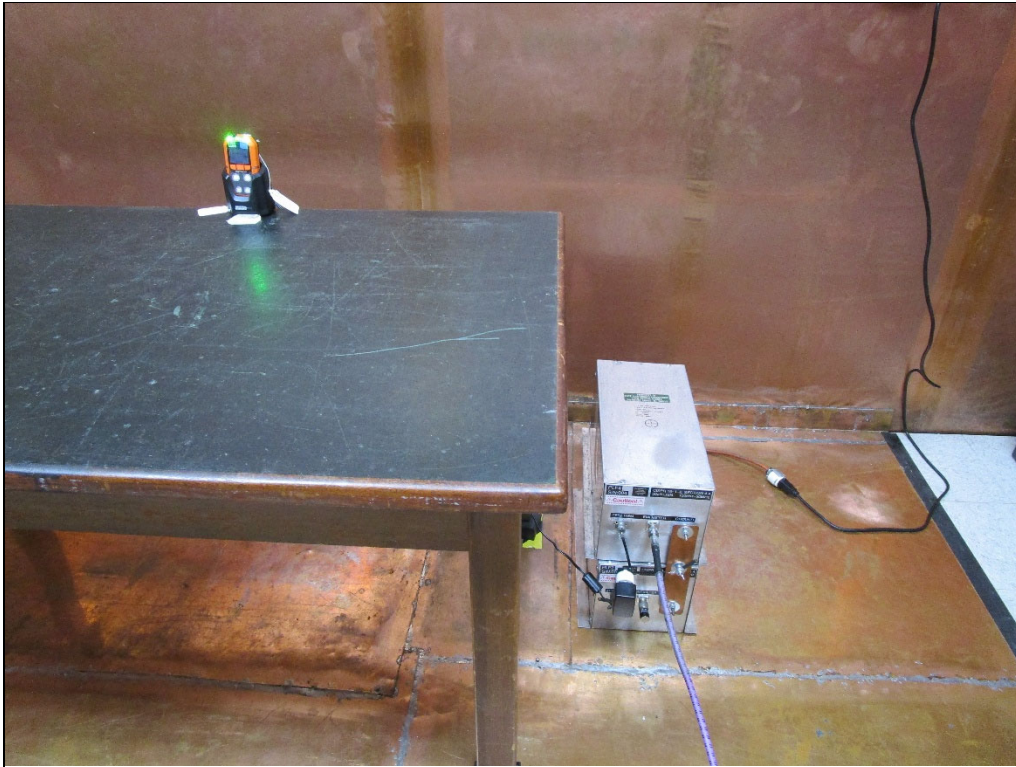
Procedure

The interference on each power lead of the EUT was measured by connecting the measuring equipment to the appropriate meter terminal of the Line Impedance Stabilization Network (LISN). The meter terminal of the LISN not under test was terminated with 50 ohms.

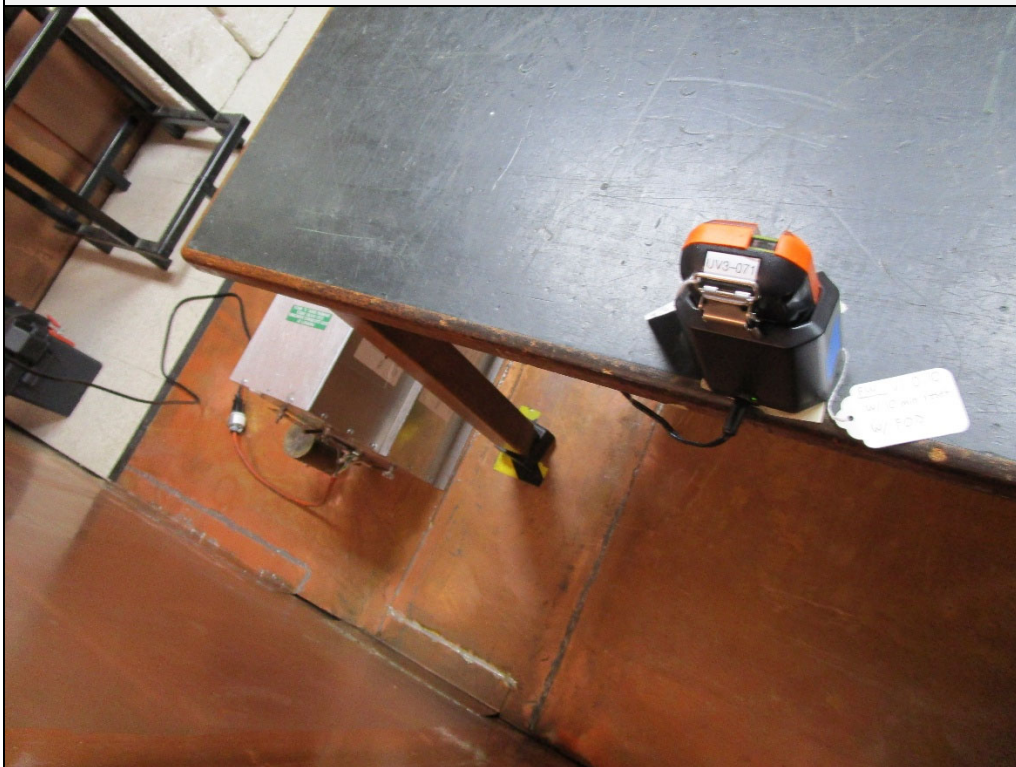
- 1) The EUT was operated in the Qi mode.
- 2) Measurements were first made on the 12 V DC high line.
- 3) The frequency range from 150kHz to 30MHz was broken up into smaller frequency sub-bands.
- 4) Conducted emissions measurements were taken on the first frequency sub-band using a peak detector.
- 5) The data thus obtained was then searched by the computer for the highest levels. Any emissions levels that were within 10dB of the average limit were then measured again using both a quasi-peak detector and an average detector. (If no peak readings were within 10dB of the average limit, quasi-peak and average readings were taken on the highest emissions levels measured during the peak detector scan.)
- 6) Steps (4) and (5) were repeated for the remainder of the frequency sub-bands until the entire frequency range from 150kHz to 30MHz was investigated. The peak trace was automatically plotted. The plot also shows quasi-peak and average readings that were taken on discrete frequencies. A table showing the quasi-peak and average readings was also generated. This tabular data compares the quasi-peak and average conducted emissions to the applicable conducted emissions limits. The resultant voltage level (VL) is a summation in decibels (dB) of the receiver meter reading (MTR) and the cable loss factor (CF).

$$\text{Formula 1: VL (dB}\mu\text{V)} = \text{MTR (dB}\mu\text{V)} + \text{CF (dB)}$$

- 7) Steps (3) through (6) were repeated on the 12 V DC return line.



Test Setup for RF Conducted Emissions (AC Mains)



Test Setup for RF Conducted Emissions (AC Mains)



Test Setup for RF Conducted Emissions (AC Mains)



Test Setup for RF Conducted Emissions (AC Mains)

FCC Part 15.207

Significant Emissions Data

Software Revision: VBR8 (03/27/2026)

Manufacturer : Industrial Scientific Corporation
 Model : 1 Unit Tectra Charger
 Serial Number : 26050100091-02
 Mode : Qi
 Line Tested : Line
 Scan Step Time [ms] : 30
 Meas. Threshold [dB] : -10
 Notes : 120VAC 60Hz
 Test Engineer : K. Gainer
 RBW : 9 kHz
 Limit : FCC 15.207
 Test Date : Jul 08, 2026 – 11:23:45 AM
 Data Filter : Up to 80 points detected with 6dB level excursion threshold over 10dB below limit

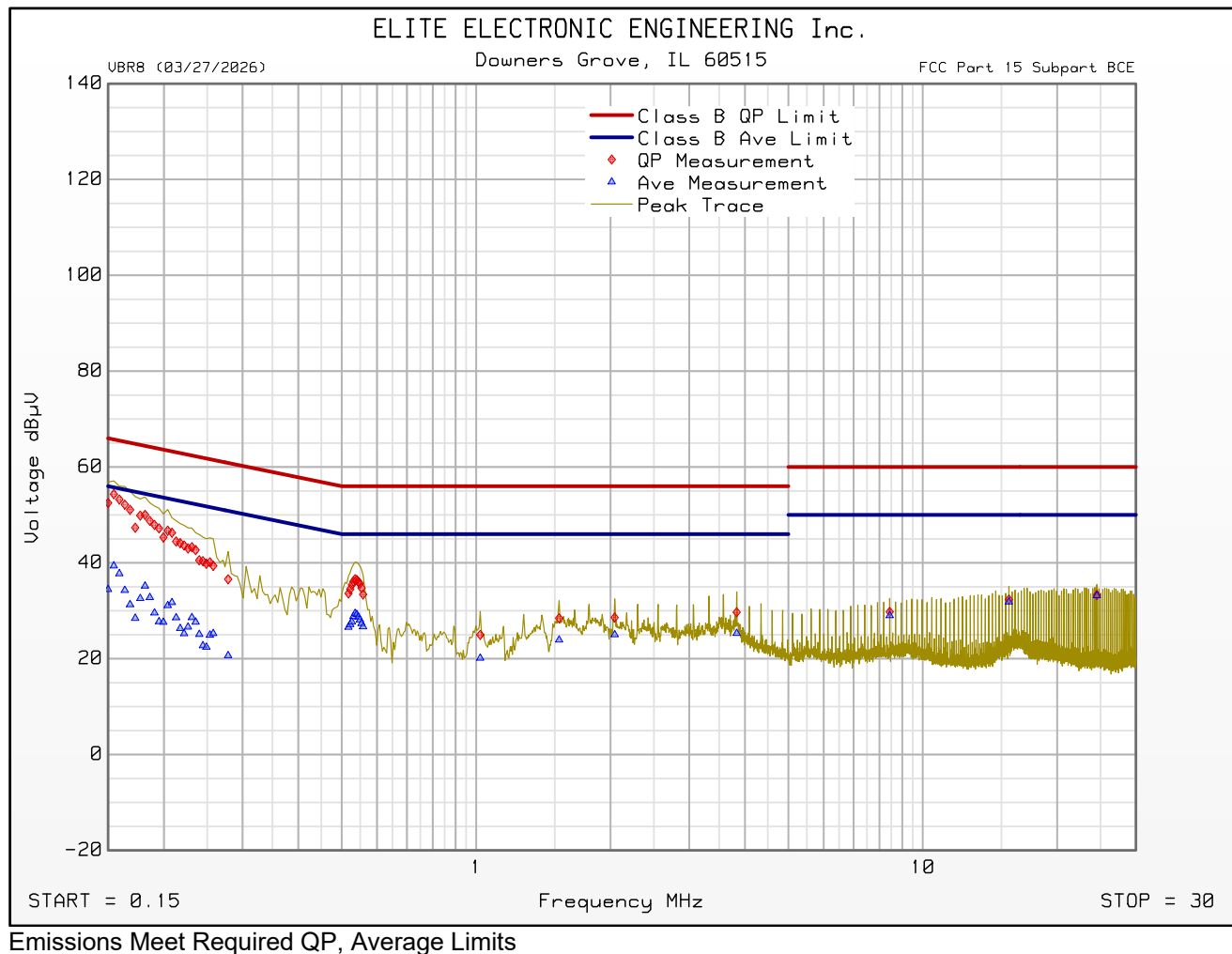
Frequency	QP Level dB μ V	QP Limit dB μ V	Excessive QP	Avg Level dB μ V	Avg Limit dB μ V	Excessive Average
154.5 kHz	54.3	65.8		39.4	55.8	
278.5 kHz	36.6	60.9		20.7	50.9	
536 kHz	36.6	56.0		29.5	46.0	
1.022 MHz	25.0	56.0		20.1	46.0	
1.534 MHz	28.4	56.0		23.9	46.0	
2.043 MHz	28.6	56.0		25.0	46.0	
3.832 MHz	29.7	56.0		25.3	46.0	
8.434 MHz	29.8	60.0		29.0	50.0	
15.589 MHz	32.4	60.0		31.9	50.0	
24.534 MHz	33.3	60.0		33.2	50.0	

FCC Part 15.207

Cumulative Data

Software Revision: VBR8 (03/27/2026)

Manufacturer : Industrial Scientific Corporation
 Model : 1 Unit Tectra Charger
 Serial Number : 26050100091-02
 Mode : Qi
 Line Tested : Line
 Scan Step Time [ms] : 30
 Meas. Threshold [dB] : -10
 Notes : 120VAC 60Hz
 Test Engineer : K. Gainer
 RBW : 9 kHz
 Limit : FCC 15.207
 Test Date : Jul 08, 2026 – 11:23:45 AM



FCC Part 15.207

Significant Emissions Data

Software Revision: VBR8 (03/27/2026)

Manufacturer : Industrial Scientific Corporation
 Model : 1 Unit Tectra Charger
 Serial Number : 26050100091-02
 Mode : Qi
 Line Tested : Neutral
 Scan Step Time [ms] : 30
 Meas. Threshold [dB] : -10
 Notes : 120VAC 60Hz
 Test Engineer : K. Gainer
 RBW : 9 kHz
 Limit : FCC 15.207
 Test Date : Jul 08, 2026 – 11:32:00 AM
 Data Filter : Up to 80 points detected with 6dB level excursion threshold over 10dB below limit

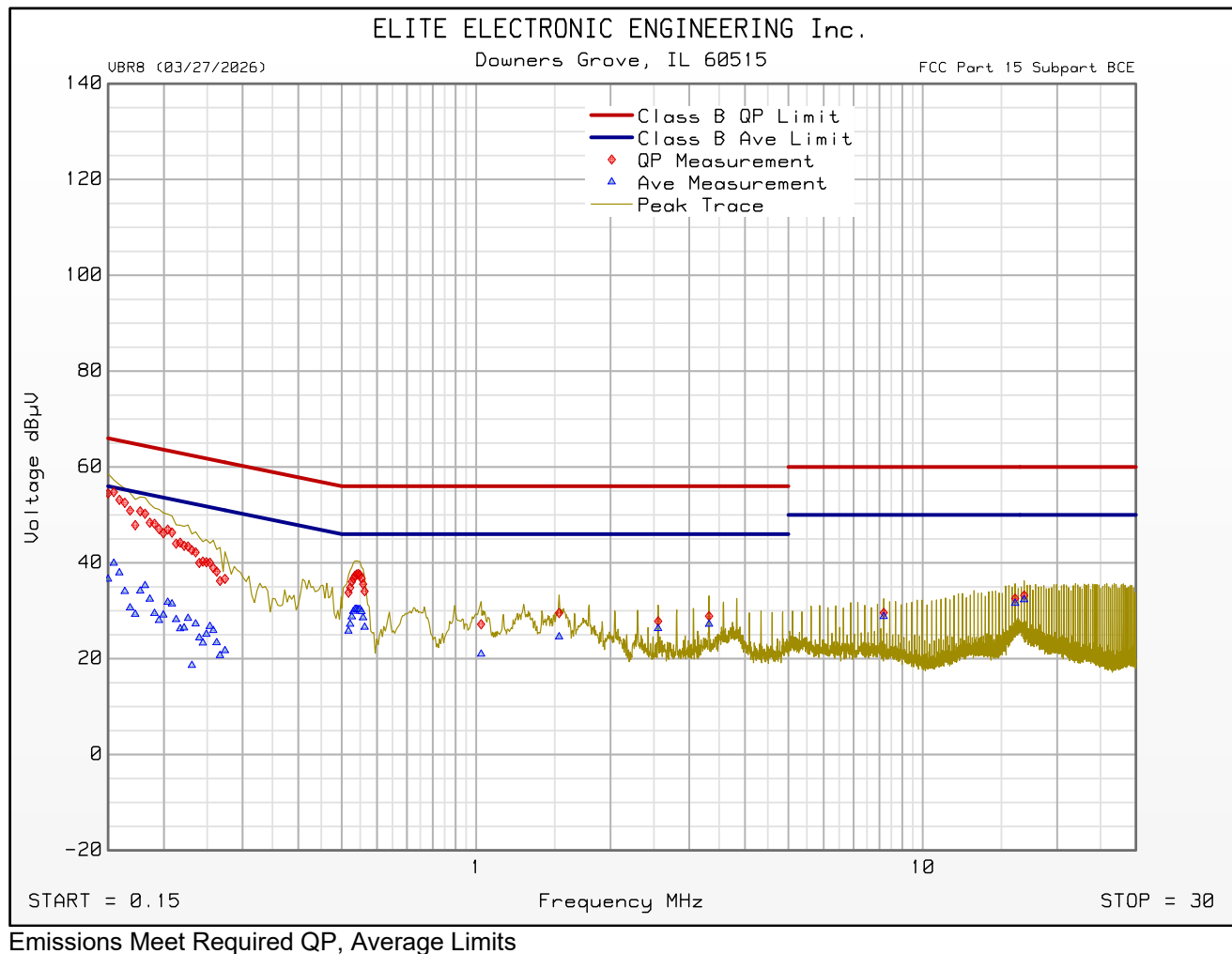
Frequency	QP Level dB μ V	QP Limit dB μ V	Excessive QP	Avg Level dB μ V	Avg Limit dB μ V	Excessive Average
154.5 kHz	54.8	65.8		39.9	55.8	
274 kHz	36.7	61.0		21.7	51.0	
545 kHz	37.7	56.0		30.2	46.0	
1.026 MHz	27.2	56.0		21.0	46.0	
1.534 MHz	29.5	56.0		24.6	46.0	
2.556 MHz	27.8	56.0		26.3	46.0	
3.323 MHz	28.9	56.0		27.2	46.0	
8.177 MHz	29.6	60.0		28.8	50.0	
16.102 MHz	32.6	60.0		31.6	50.0	
16.866 MHz	33.2	60.0		32.3	50.0	

FCC Part 15.207

Cumulative Data

Software Revision: VBR8 (03/27/2026)

Manufacturer : Industrial Scientific Corporation
 Model : 1 Unit Tectra Charger
 Serial Number : 26050100091-02
 Mode : Qi
 Line Tested : Neutral
 Scan Step Time [ms] : 30
 Meas. Threshold [dB] : -10
 Notes : 120VAC 60Hz
 Test Engineer : K. Gainer
 RBW : 9 kHz
 Limit : FCC 15.207
 Test Date : Jul 08, 2026 – 11:32:00 AM



21. Transmitter Radiated Emissions

EUT Information	
Manufacturer	Industrial Scientific Corporation
Equipment Under Test	1 Unit Tectra Charger
Model No.	18109768
Serial No.	26050100091-02
Mode	Qi

Test Setup Details	
Setup Format	Tabletop
Measurement Method	Radiated
Type of Test Site	Semi-Anechoic Chamber
Test Site Used	R21F
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

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 1.0GHz was investigated using a peak detector function.

The final open field emission tests were then manually performed over the frequency range of 30MHz to 1.0GHz.

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 loop antenna. The loop 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 9 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 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 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 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:

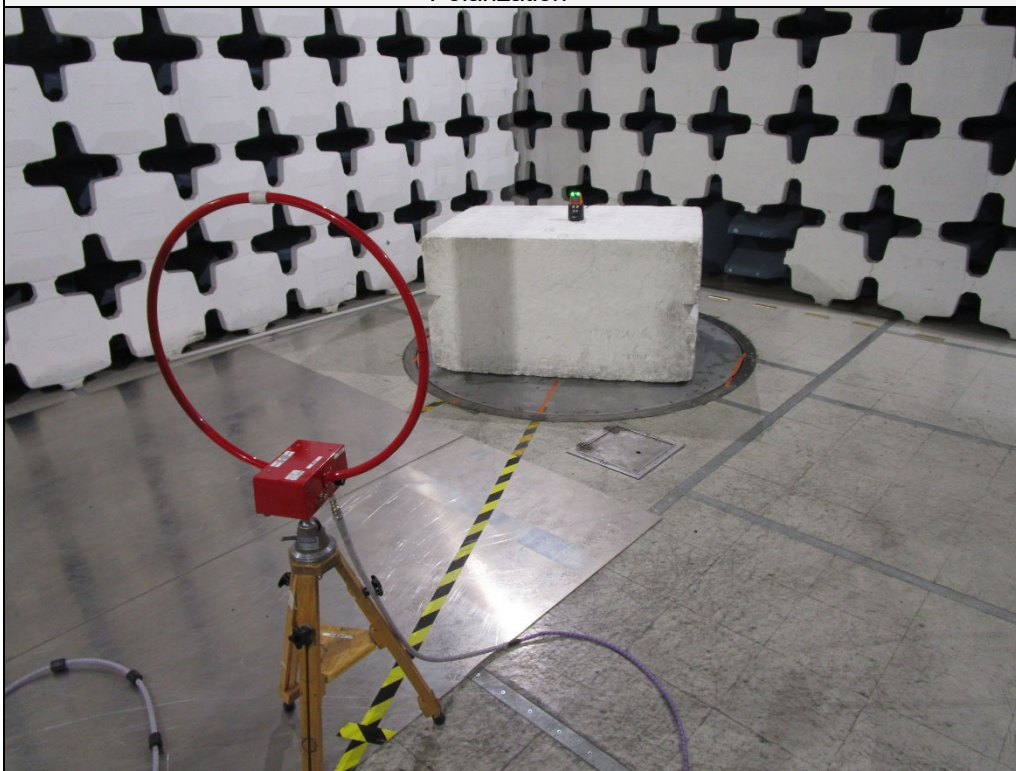
- a) The field strengths of all emissions below 1GHz were measured using a bi-log antenna. The bi-log antenna was positioned at a 3 meter distance from the EUT. The EUT was placed on an 80cm high non-conductive stand. A peak detector with a resolution bandwidth of 100 kHz was used on the spectrum analyzer.
- 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) Lastly, for all radiated emissions measurements above 1GHz, the resolution bandwidth (RBW) was set to 1MHz with the video bandwidth (VBW) set to $\geq 3 \times \text{RBW}$. The detector was set to power averaging (rms). Averaging type was set to power. Sweep time was set to auto and a trace average of at least 100 traces was performed. The measurement was recorded and compared to the limit specified in §15.209(a).



Test Setup for Radiated Spurious Emissions: 9kHz to 30MHz, Horizontal Polarization



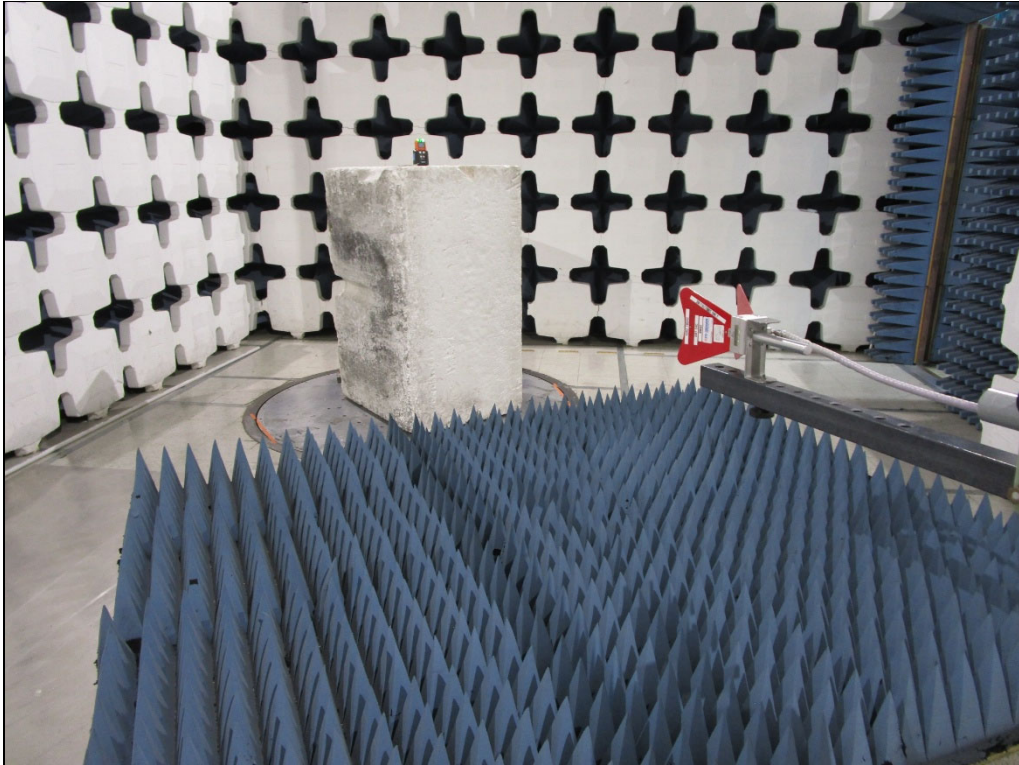
Test Setup for Radiated Spurious Emissions: 9kHz to 30MHz, Vertical Polarization



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



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



Test Setup for Radiated Spurious Emissions: 1GHz to 18GHz, Horizontal Polarization

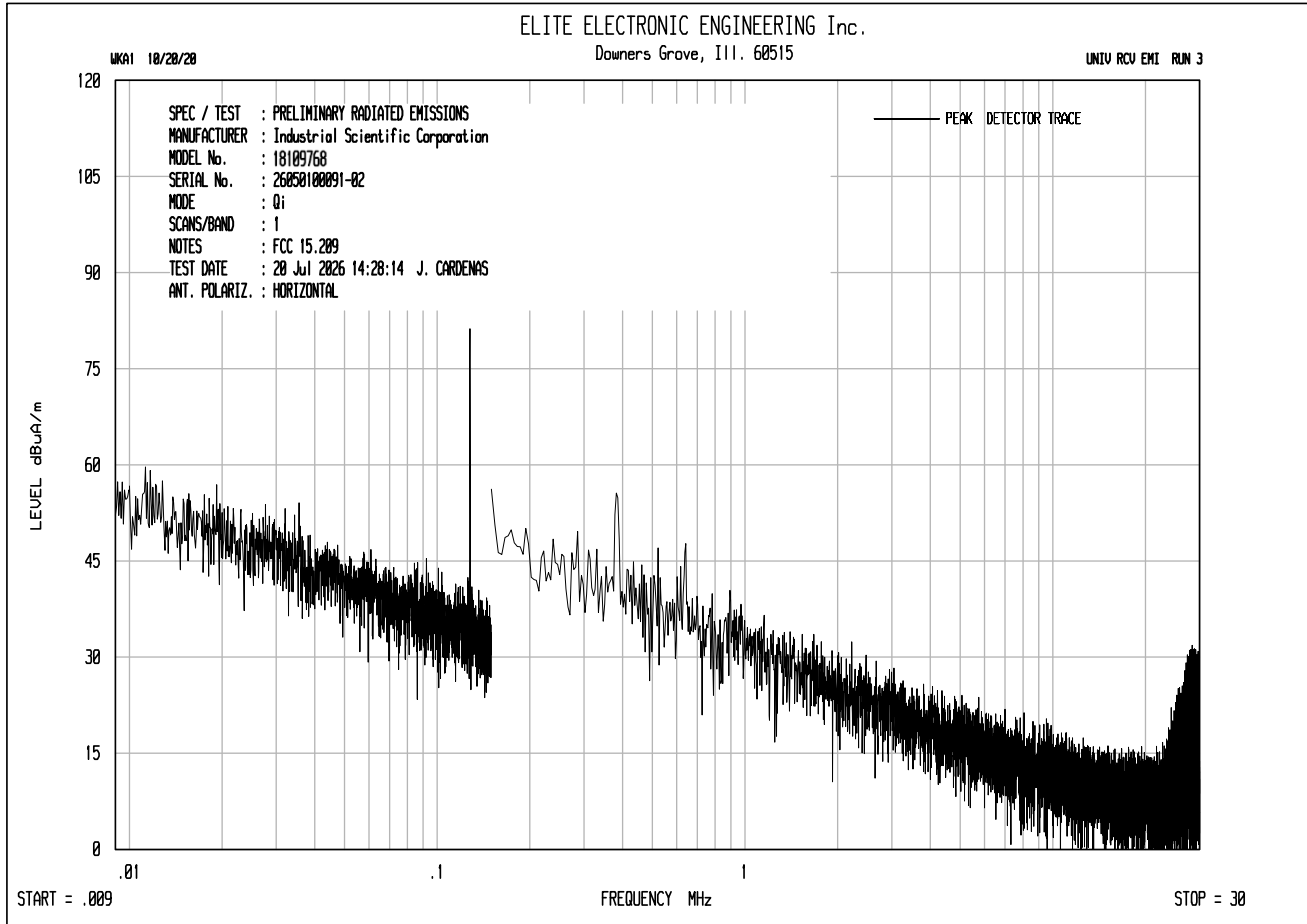


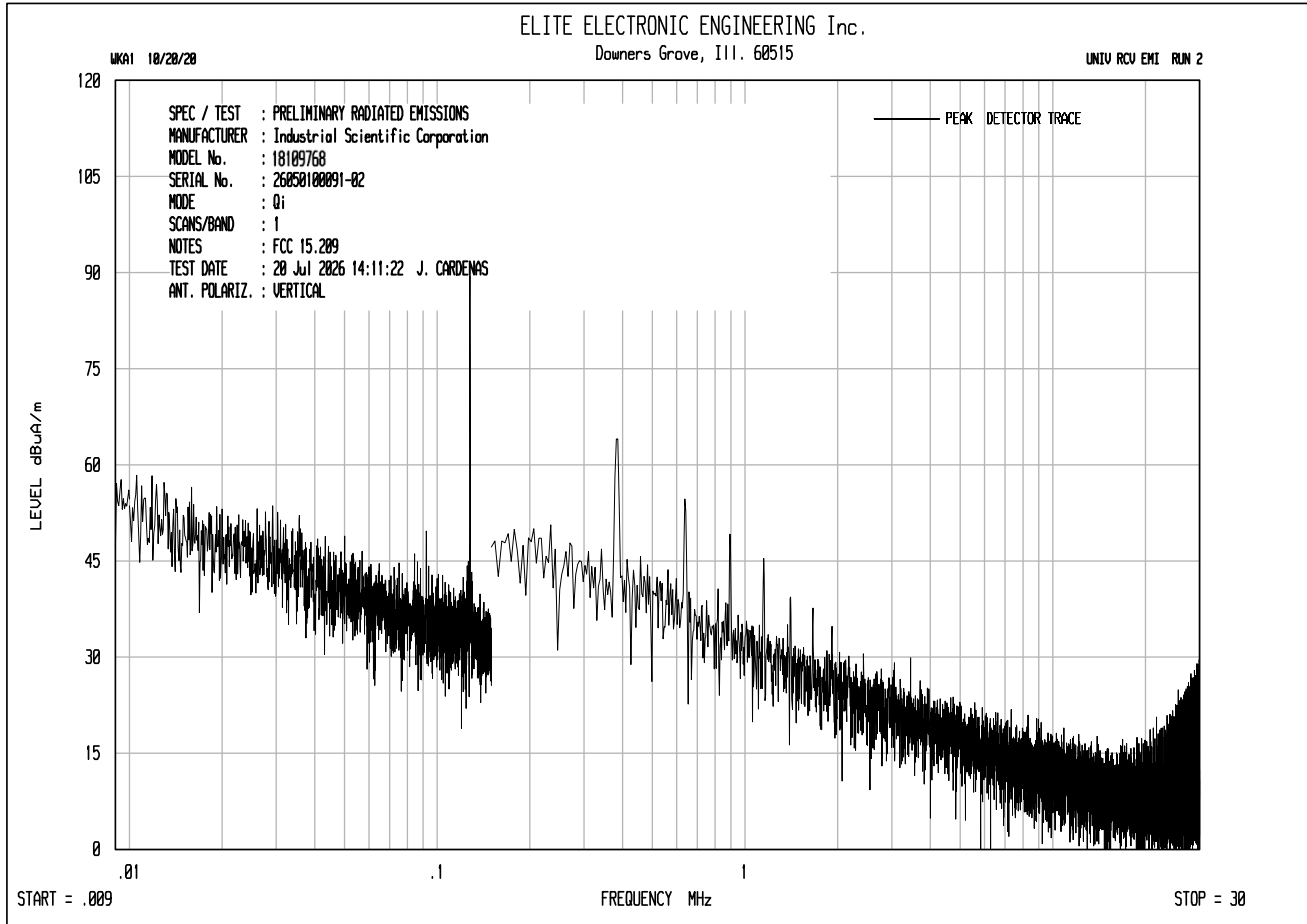
Test Setup for Radiated Spurious Emissions: 1GHz to 18GHz, Vertical Polarization

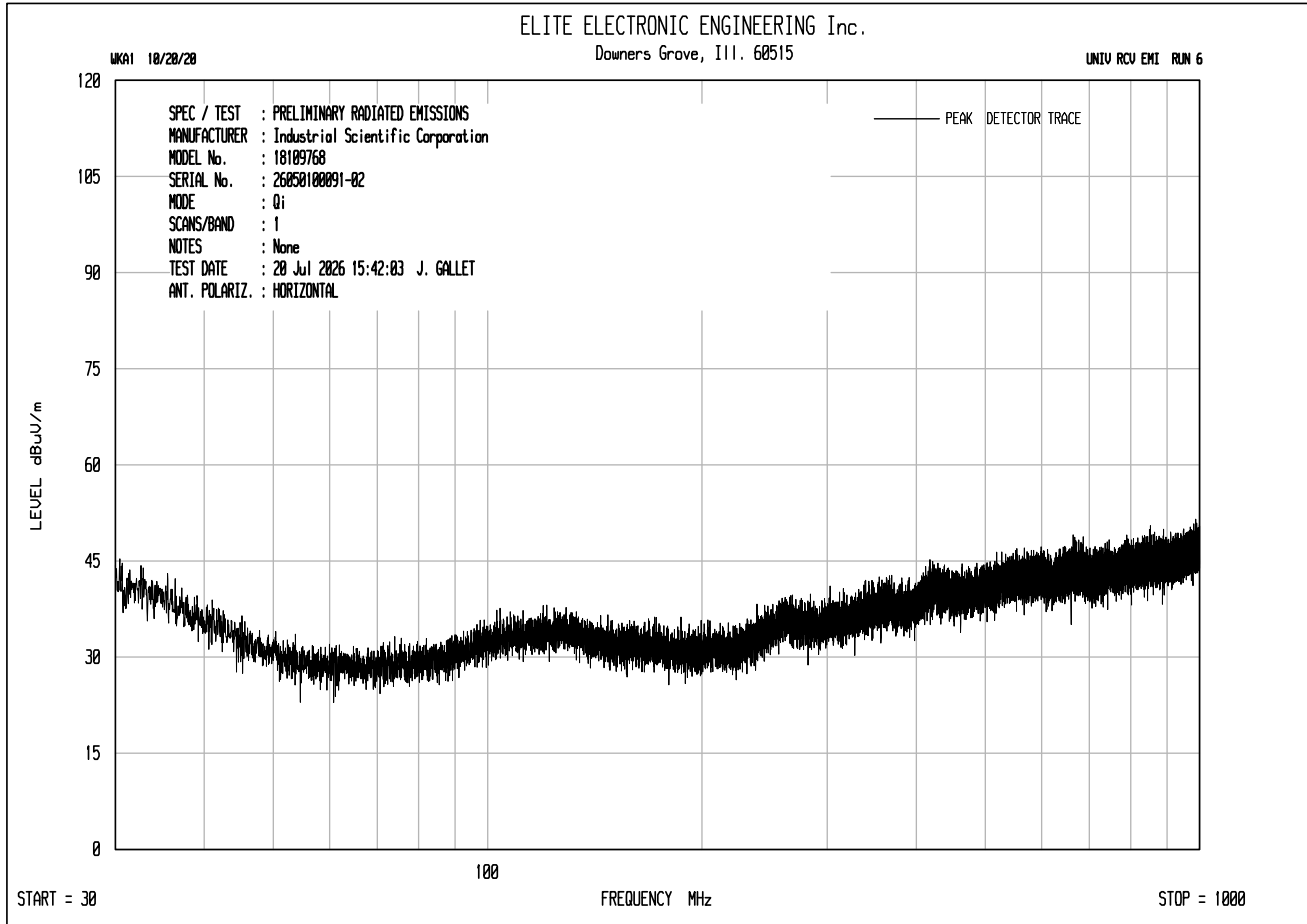
Test Details	
Manufacturer	Industrial Scientific Corporation
Equipment Under Test	1 Unit Tectra Charger
Model No.	18109768
Serial No.	26050100091-02
Mode	Qi
Frequency Tested	128.5kHz
Notes	Peak Measurements in Non-Restricted Bands

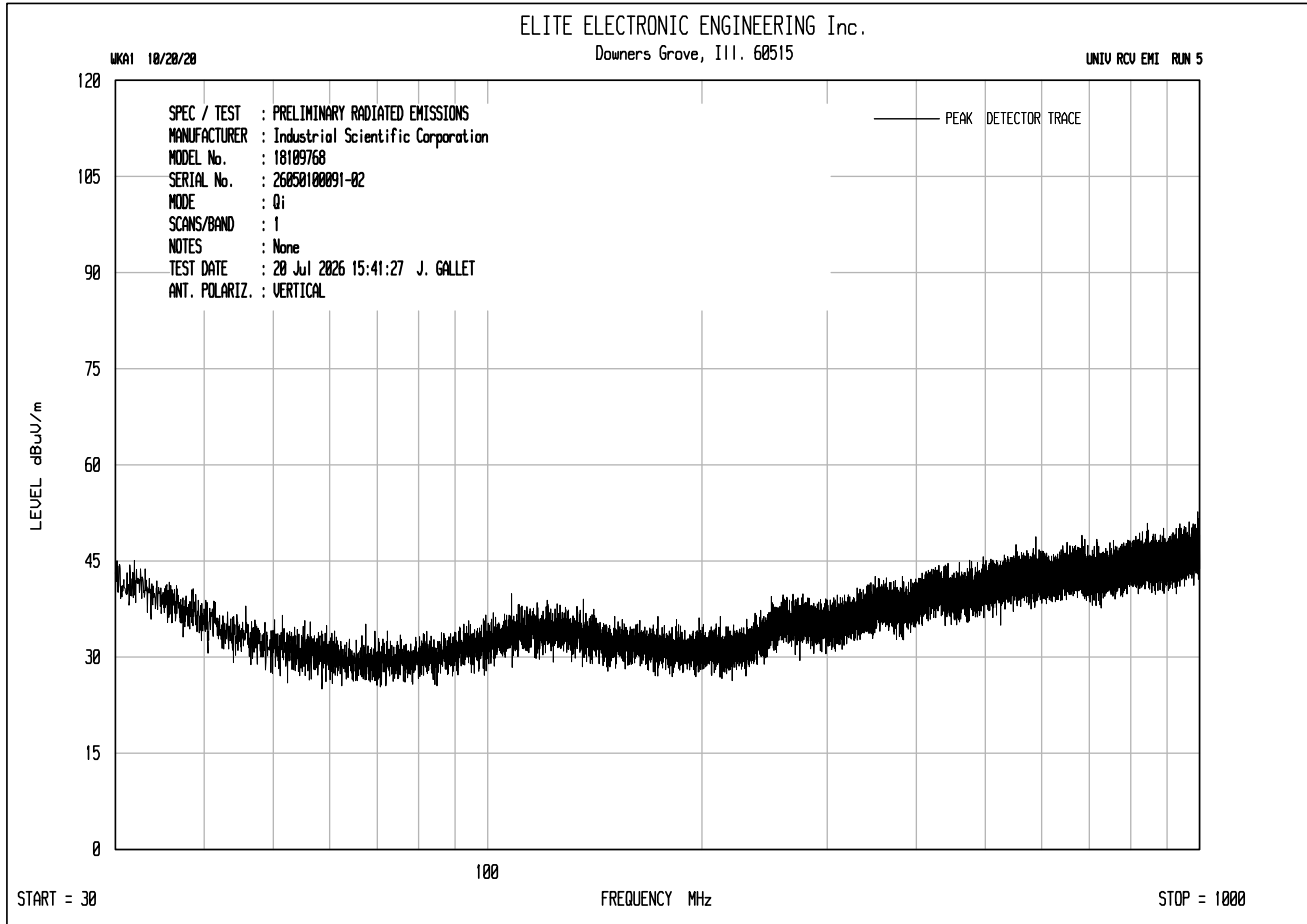
Freq. (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Dist. Corr. (dB)	Total (dBuV/m)	Total (uV/m)	Limit (uV/m)	Specified Test Distance (meters)	Margin (dB)
0.129	H	64.5		0.0	11.4	0.0	-80.0	-4.1	0.6	18.7	300.0	-29.5
0.129	V	73.2		0.0	11.4	0.0	-80.0	4.6	1.7	18.7	300.0	-20.8
0.257	H	41.1		0.0	11.4	0.0	-80.0	-27.5	0.0	9.3	300.0	-46.9
0.257	V	41.6	*	0.0	11.4	0.0	-80.0	-27.0	0.0	9.3	300.0	-46.4
0.386	H	47.0		0.0	11.4	0.0	-80.0	-21.6	0.1	6.2	300.0	-37.5
0.386	V	54.3		0.0	11.4	0.0	-80.0	-14.3	0.2	6.2	300.0	-30.2
0.514	H	37.5	*	0.0	11.4	0.0	-40.0	8.9	2.8	46.7	30.0	-24.5
0.514	V	38.3	*	0.0	11.4	0.0	-40.0	9.7	3.0	46.7	30.0	-23.7
0.643	H	39.8		0.0	11.4	0.0	-40.0	11.2	3.6	37.4	30.0	-20.3
0.643	V	45.9		0.0	11.4	0.0	-40.0	17.3	7.3	37.4	30.0	-14.2
0.771	H	32.8	*	0.0	11.4	0.0	-40.0	4.2	1.6	31.1	30.0	-25.7
0.771	V	32.9		0.0	11.4	0.0	-40.0	4.3	1.6	31.1	30.0	-25.6
0.900	H	34.9		0.0	11.4	0.0	-40.0	6.2	2.1	26.7	30.0	-22.3
0.900	V	40.1		0.0	11.4	0.0	-40.0	11.5	3.7	26.7	30.0	-17.0
1.028	H	29.9	*	0.0	11.4	0.0	-40.0	1.3	1.2	23.3	30.0	-26.1
1.028	V	30.6		0.0	11.4	0.0	-40.0	2.0	1.3	23.3	30.0	-25.4
1.157	H	31.3		0.0	11.4	0.0	-40.0	2.8	1.4	20.8	30.0	-23.6
1.157	V	36.3		0.0	11.4	0.0	-40.0	7.7	2.4	20.8	30.0	-18.6
1.285	H	28.1	*	0.0	11.4	0.0	-40.0	-0.5	0.9	18.7	30.0	-25.9
1.285	V	28.2	*	0.0	11.4	0.0	-40.0	-0.3	1.0	18.7	30.0	-25.8

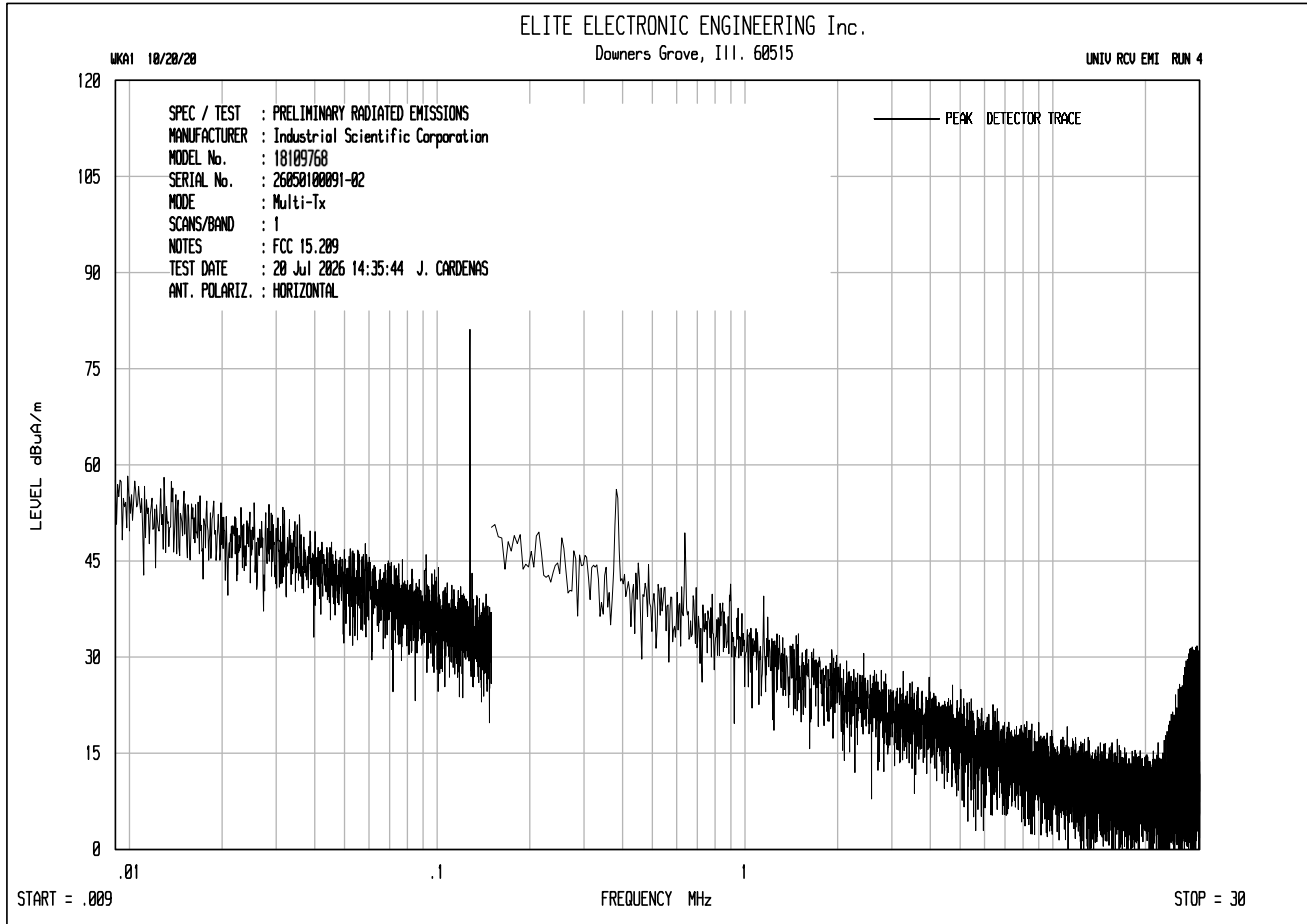
Note: No intermodulation products were detected in the Multi-Tx mode of operation, therefore no tabular data is presented for spurious emissions in this mode.

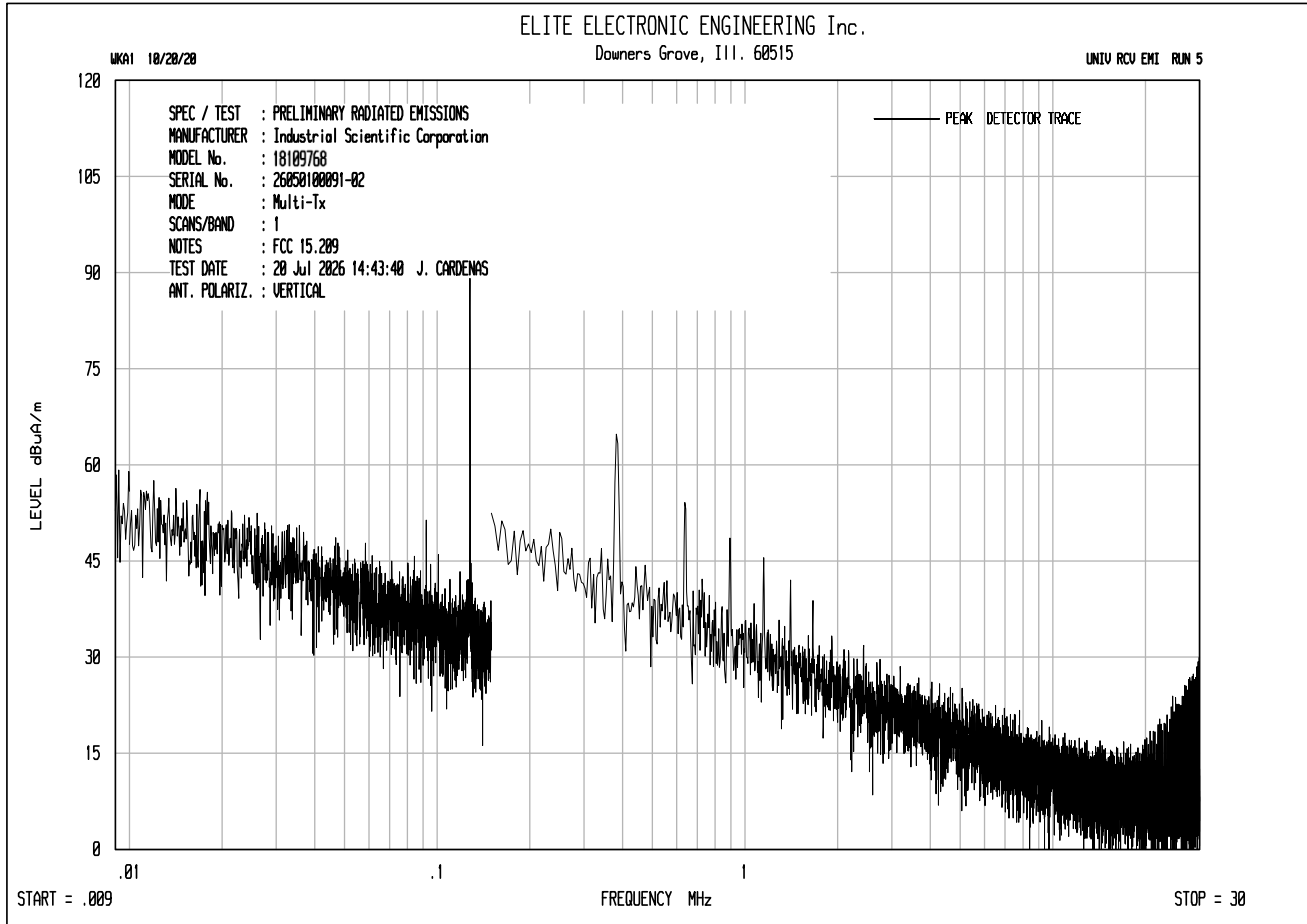


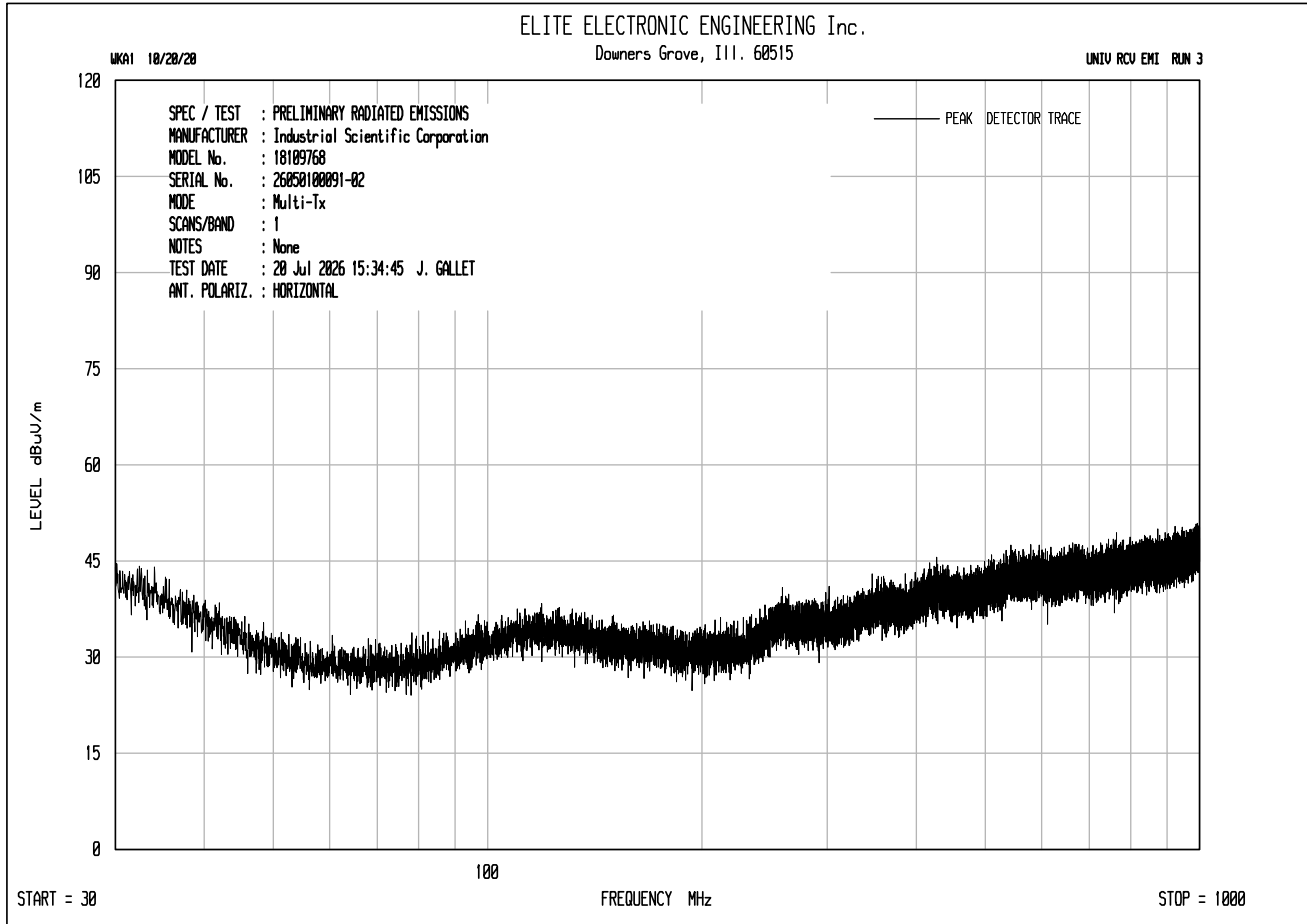


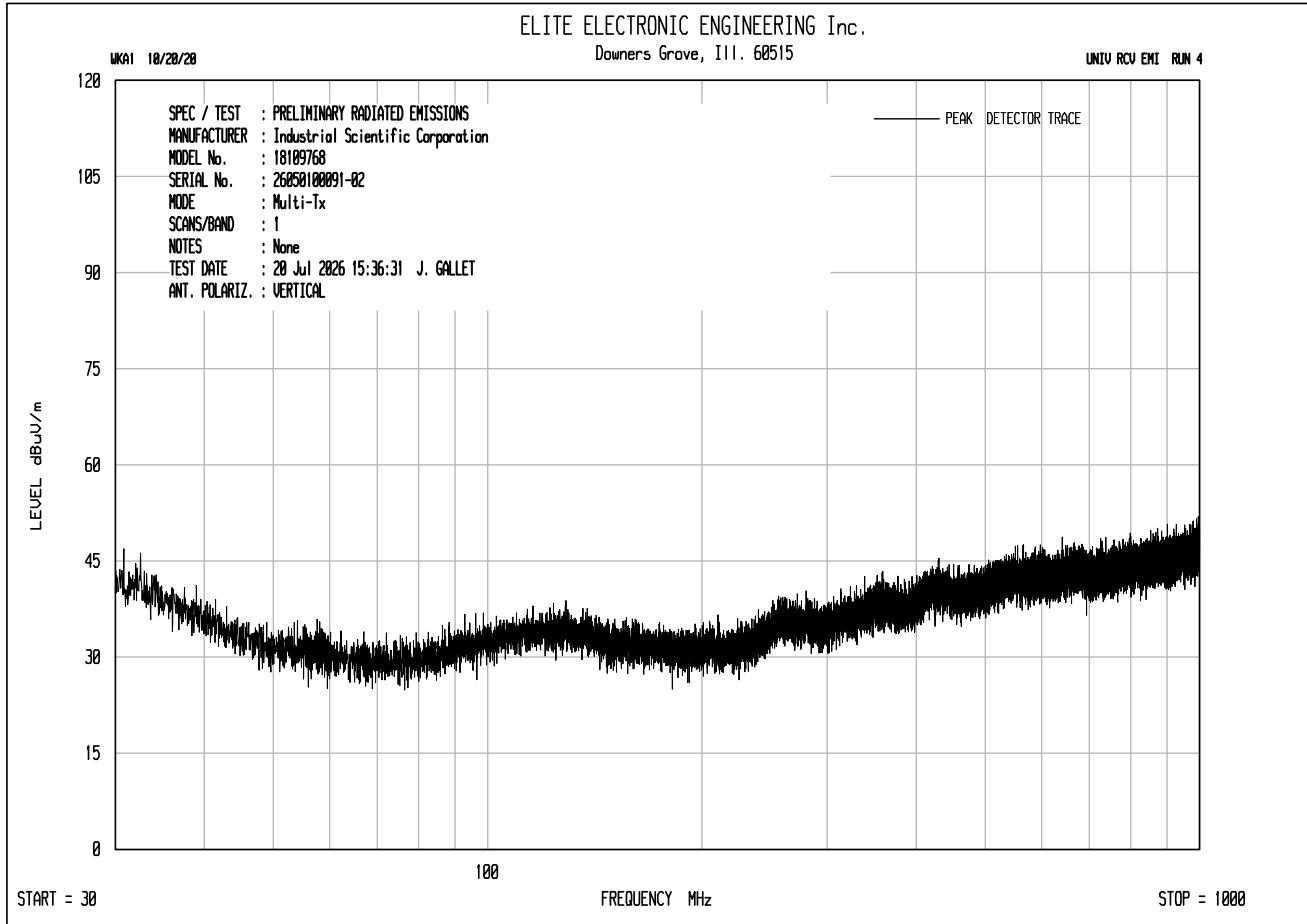


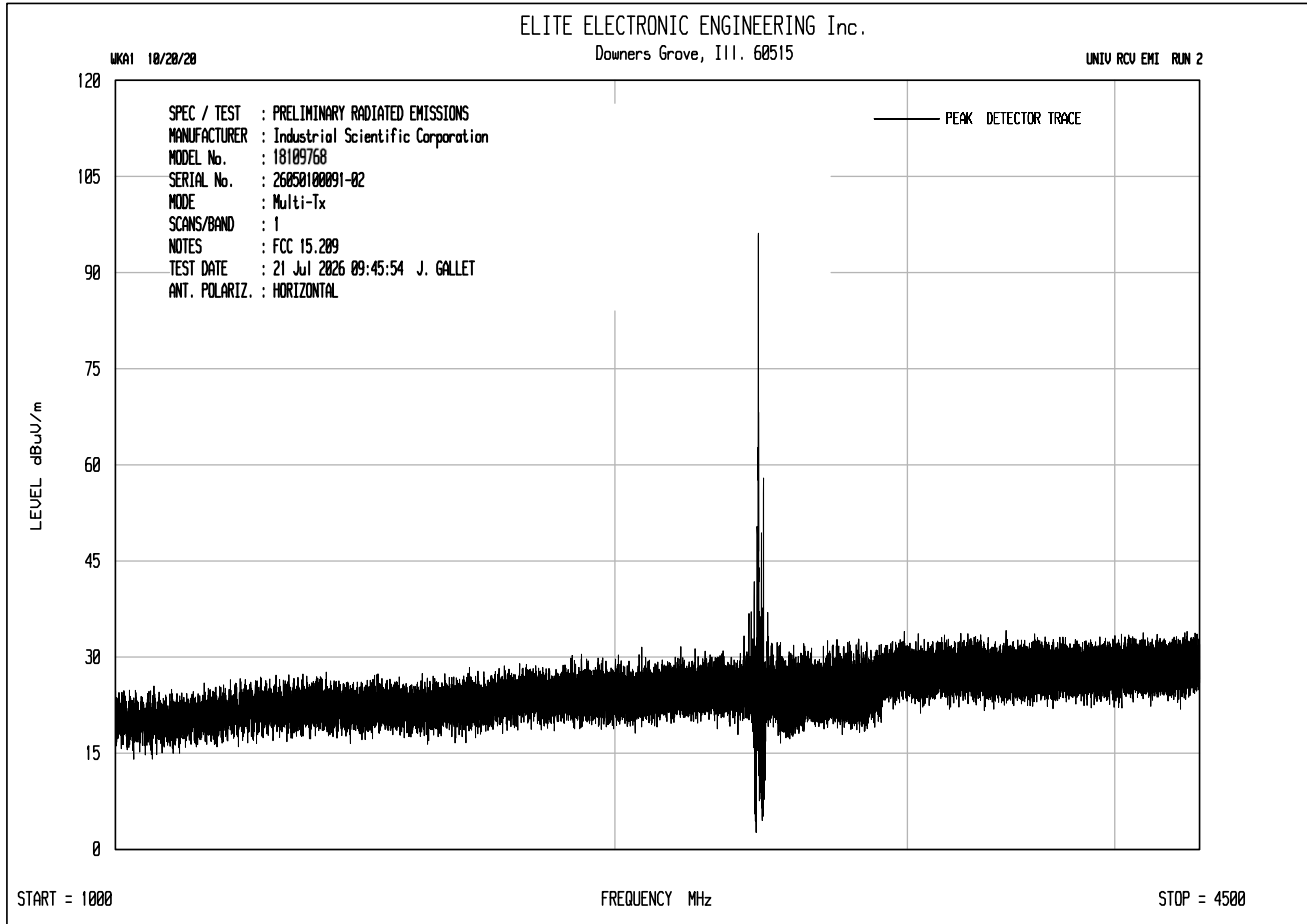


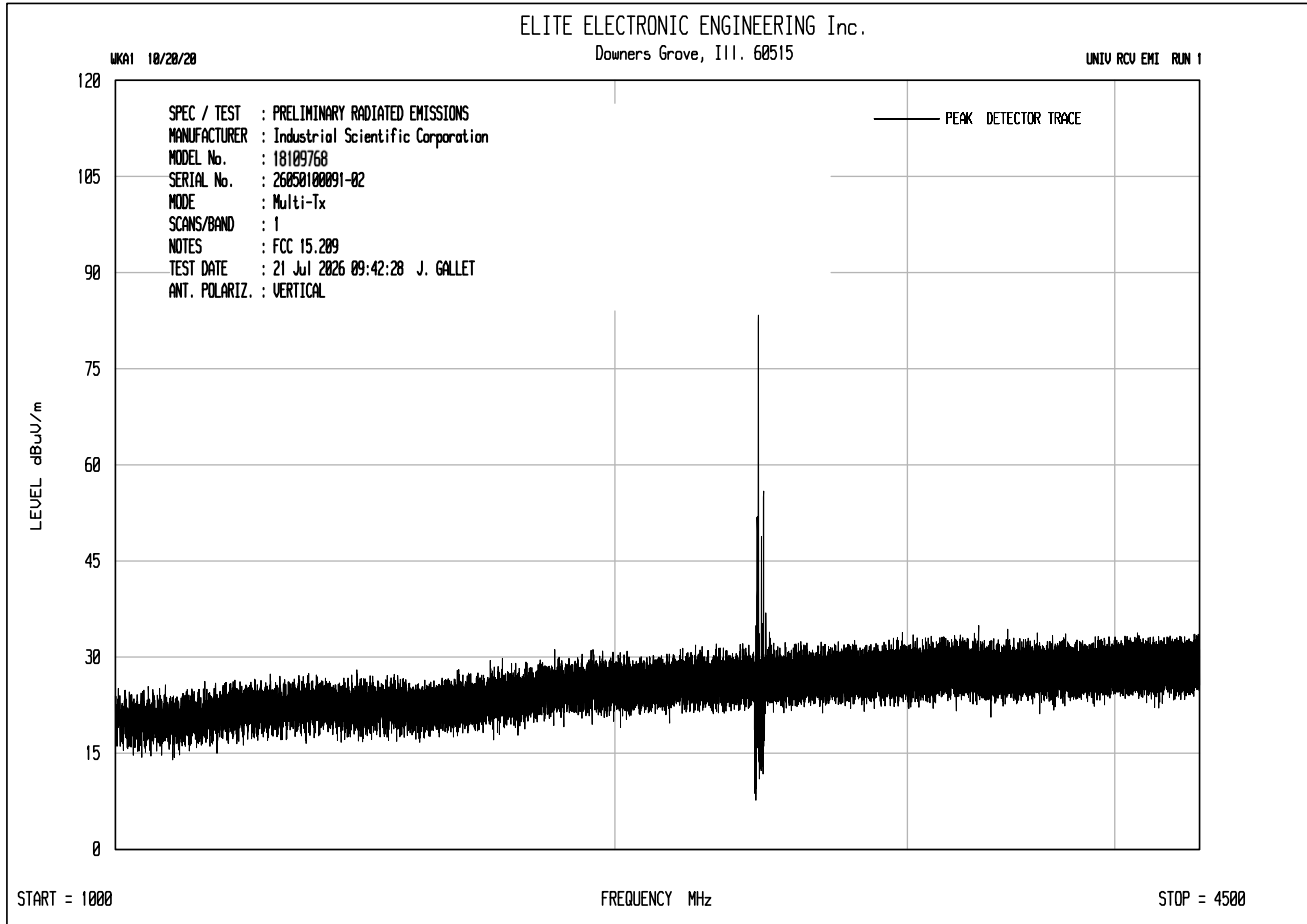


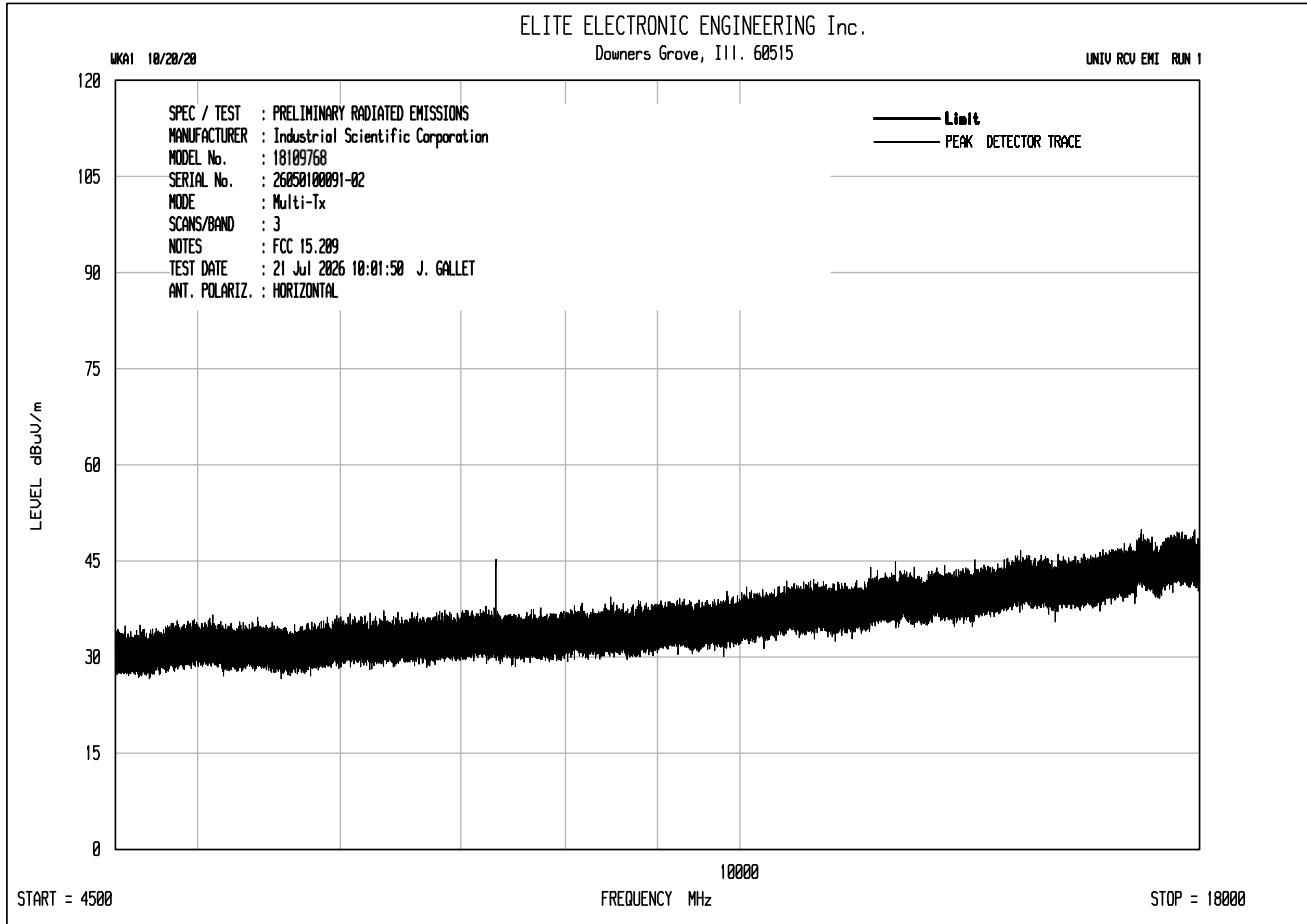


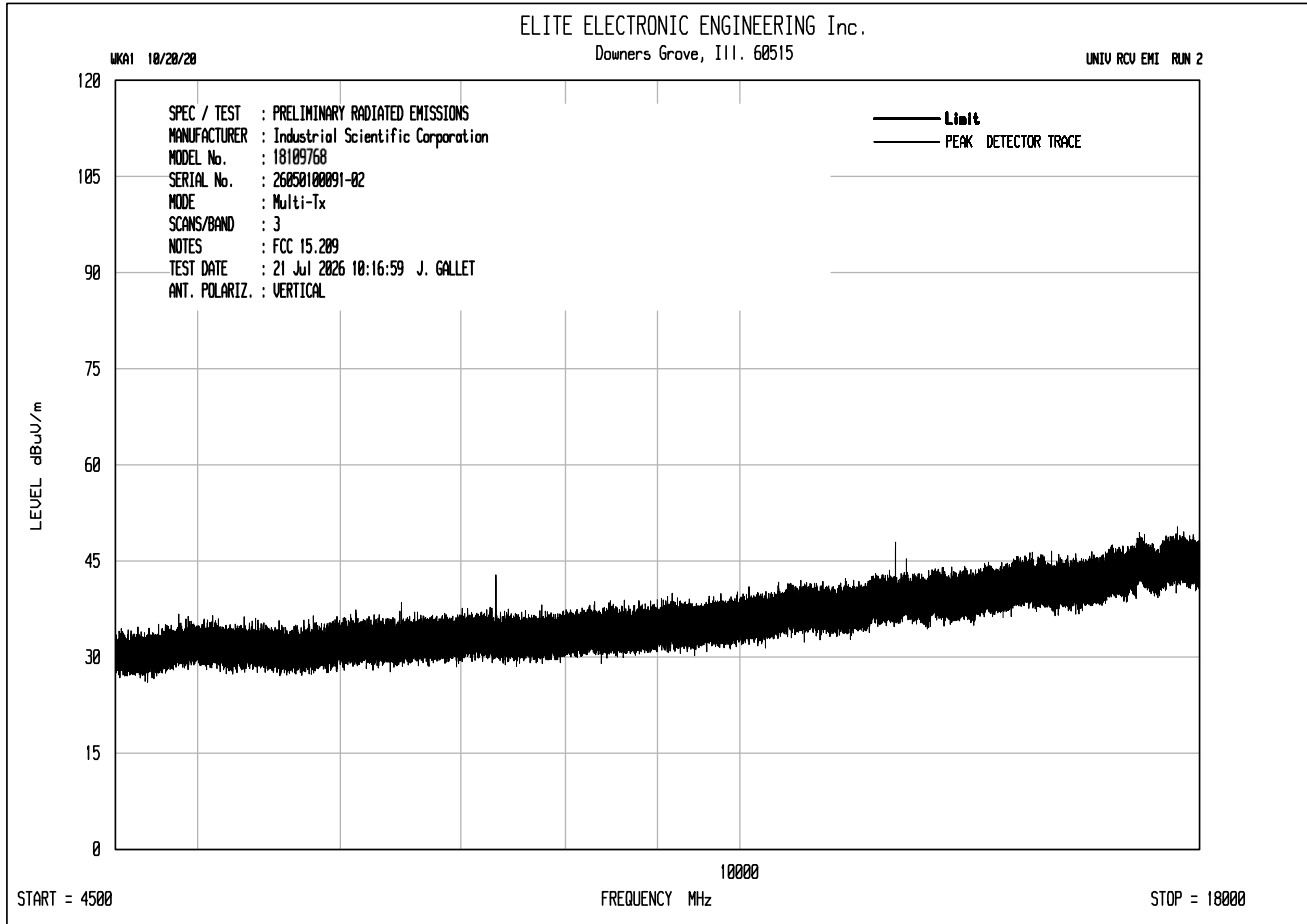












22. Nerve Stimulation

EUT Information	
Manufacturer	Industrial Scientific Corporation
Equipment Under Test	1 Unit Tectra Charger
Model No.	18109768
Serial No.	26050100091-02
Mode	Qi

Test Setup Details	
Setup Format	Tabletop
Measurement Method	Radiated
Separation Distance	0mm
Type of Test Site	Elite Test Bench
Type of Antenna Used	narda EHP-200AC Electric and Magnetic Field Analyzer (3kHz – 30MHz)
Notes	Curve fitting performed (0mm separation distance)

Curve Fitting Procedure	
The following procedure shall be utilized when a Nerve Stimulation assessment needs to be performed at touch position (0mm). The method described below is known as curve fitting and applies when the probe's receiving elements are positioned within the probe enclosure. 1) The EUT was operated in the Qi mode. 2) The EUT was placed on an 80cm tall, non-conductive support. 3) The narda EHP-200AC Electric and Magnetic Field Analyzer was mounted to an adjustable tripod and positioned such that the face of the narda analyzer was correspondent with the face of the EUT producing the strongest emissions. 4) With the center of the face of the EUT as the origin point, five evenly spaced marks were made along the positive and negative X and Y axes to create a 10-point by 10-point X-Y grid. To ensure the points extended past the EUT along each axis, each mark was separated by 10mm. 5) The maximum electric field strength was recorded at each position in the 10-point by 10-point X-Y grid while maintaining a 0mm separation distance between the face of the EUT and the measurement face of the analyzer. 6) The position of the highest measured field strength was then found and the analyzer was returned to this position. 7) Ten marks were then made along the Z-axis, each separated by 10mm, with the first mark representing 0mm separation from the EUT. 8) The maximum electric field strength was recorded at each position along the Z-axis while maintaining the same X-Y position found to produce the highest field strength. 9) The distance between the sensitive elements and the external surface of the EHP-200AC Electric and Magnetic Field Analyzer, as specified by narda Safety Test Solutions EHP-200AC User's Manual, is 8mm. The maximum field strength data gathered along the Z-axis was plotted in a Distance (mm) vs E-Field (V/m) graph, with each position positively offset by an additional 8mm, and a curve of best fit was applied. 10) The Y-intercept of the curve of best fit was then recorded as the true 0mm separation distance maximum electric field strength. 11) Steps (5) through (10) were repeated with maximum magnetic field measurements.	

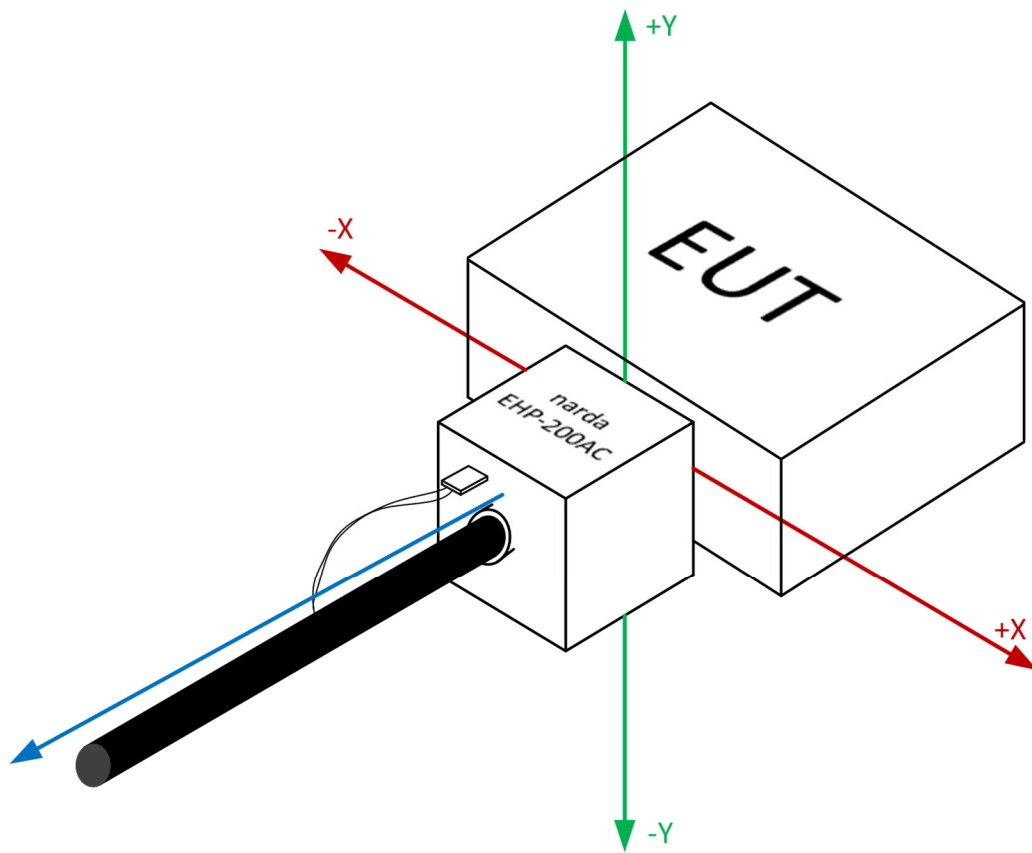
Nerve Stimulation Procedure

The following procedure was used to measure the maximum electric field and maximum magnetic field strengths produced at 0mm separation distance:

- 1) The EUT was operated in the Qi mode.
- 2) The EUT was placed on an 80cm tall, non-conductive support.
- 3) The narda EHP-200AC Electric and Magnetic Field Analyzer was mounted to an adjustable tripod and positioned such that the face of the narda analyzer was separated by 0mm from one face of the EUT.
- 4) The maximum electric field strength in the range of 3kHz to 10MHz was then recorded.
- 5) The maximum magnetic field strength in the range of 3kHz to 3MHz was then recorded.
- 6) The maximum magnetic field strength in the range of 3MHz to 10MHz was then recorded.
- 7) Steps (3) through (6) were repeated for each face of the EUT.

Field Strength Limits

Field Type	Frequency Range (MHz)	Reference Level Basis	Reference Level (uncontrolled)	Reference Level (controlled)	Reference Period
Electric	0.003 – 10	NS	83 V _{RMS} /m	170 V _{RMS} /m	Instantaneous
Magnetic			90 A _{RMS} /m	180 A _{RMS} /m	



Nerve Stimulation Test Setup and Axes Orientation



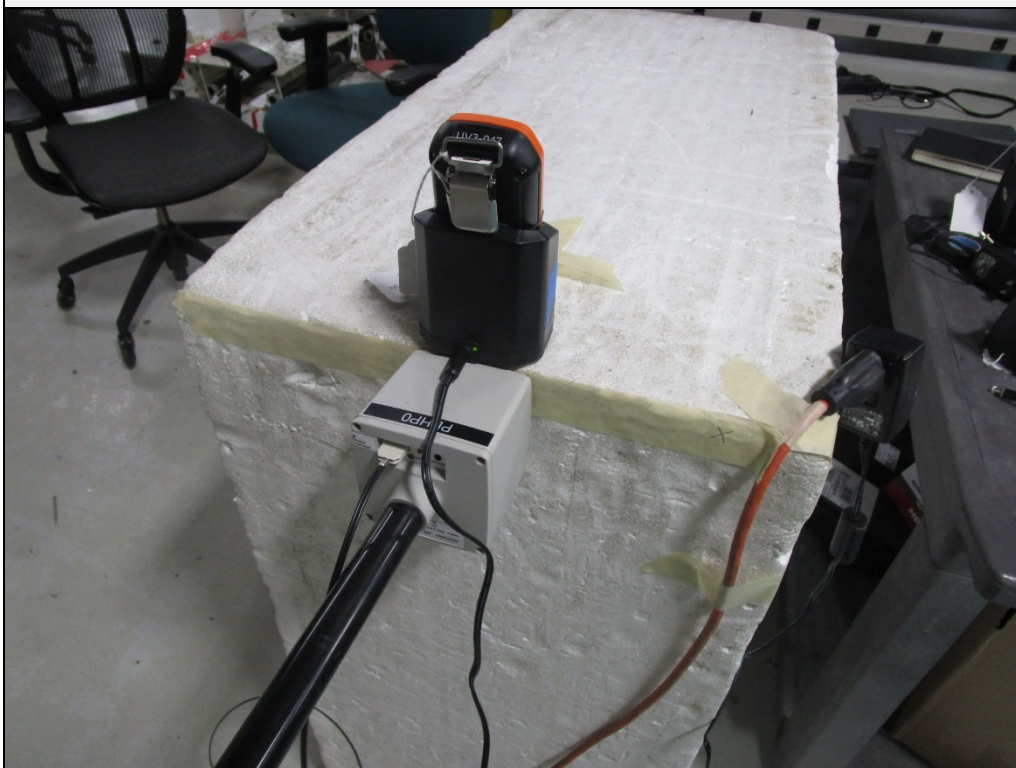
Test Setup for Nerve Stimulation: Analyzer at (0,0,0)



Test Setup for Nerve Stimulation: Analyzer at (-50,0,0)



Test Setup for Nerve Stimulation: Analyzer at (+50,0,0)



Test Setup for Nerve Stimulation: Analyzer at (0,-50,0)