



Engineering Test Report No. 2600613-02

Report Date	May 14, 2026	
Manufacturer Name	Viavi Solutions Inc	
Manufacturer Address	5808 Churchman Bypass Indianapolis, IN 46203	
Product Name Brand/Model No.	Quad Wavelength Power Meter DCX-760	
Date Received	April 1, 2026	
Test Dates	April 3, 2026 – May 5, 2026	
Specifications	FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247 FCC "Code of Federal Regulations" Title 47 Part 15, Subpart E, Section 15.407 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		
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Signature		
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PO Number	2941023421	

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1. Report Revision History

Revision	Date	Description
–	18 MAY 2026	Initial Release of Engineering Test Report No. 2600613-02

2. Introduction

This document presents the results of limited output power, radiated emissions and band-edge measurements that were performed on one (1) Quad Wavelength Power Meter (hereinafter referred to as the Equipment Under Test (EUT)). The EUT is a composite system comprised of a precertified radio module and a host device. The nature of these measurements is to ensure that the EUT remains in compliance with the emissions requirements of the FCC after the integration process.

The EUT was identified as follows:

EUT Identification	
Description	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Software/Firmware Version	DCX 0.3.424
Size of EUT	8.5" x 2.5" x 5"
Number of Interconnection Wires	1
Type of Interconnection Wires	Fiber Optic

The EUT is equipped with the following radio module:

- u-blox MAYA-W2, FCC ID XPYMAYAW2A operating in the 2.4MHz & 5GHz band/frequency.

3. Power Input

The EUT was powered by 7.2VDC from a rechargeable battery pack.

The battery is charged with an Adapter Tech, Model No. ATN045A3-W200V, AC/DC power adapter. The power adapter receives 120V 60Hz power.

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
Adapter Tech AC/DC Power Adapter	ATN045A3-W200V	---
Laptop	Dell Latitude 5430	---

6. Interconnect Leads

The following interconnect cables were submitted with the EUT:

Item	Description
Fiber optic	Connects DCX-750 light source with DCX-760 power meter.

7. Modifications Made to the EUT

No modifications were made to the EUT during the testing.

8. Modes of Operation

The EMC tests were performed with the EUT operating in one of the test modes described below. The EUT was configured to transmit at one of the following modes:

Mode	Description
Tx	- WiFi 2412MHz, 2437MHz, 2462MHz, 802.11b/g/n/ax 2402MHz, 2480MHz BLE - WiFi 5180MHz, 5300MHz, 5785MHz, 802.11a/n/ac/ax (US country code enabled in firmware)
Multi-Tx	Simultaneous transmission of 2402MHz BLE and 5180MHz 802.11n WiFi.

9. Test Specifications

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

- Federal Communications Commission "Code of Federal Regulations", Title 47, Chapter I, Subchapter A, Part 15, Subpart C
- Federal Communications Commission "Code of Federal Regulations", Title 47, Chapter I, Subchapter A, Part 15, Subpart E
- 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"
- 996369 D04 Module Integration Guide v02, October 13, 2020

10. Test Plan

No test plan was provided. Instructions were provided by personnel from Viavi Solutions Inc and used in conjunction with the FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247 and FCC "Code of Federal Regulations" Title 47 Part 15, Subpart E, Section 15.407, Innovation, Science, and Economic Development Canada, RSS-247, and ANSI C63.10-2020+Cor. 1:2023+C63.10a:2024 specifications.

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 following were the laboratory conditions while the EMC tests were performed:

Ambient Parameters	Value
Temperature	21.9°C
Relative Humidity	Humidity%
Atmospheric Pressure	1018mb

13. Summary

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

Test Description	Test Requirements	Test Methods	Results
Output Power	FCC 15.247 FCC 15.407 RSS-247	ANSI C63.10-2020+Cor. 1:2023+C63.10a:2024	Conforms
RF Radiated Emissions	FCC 15.247 FCC 15.407 RSS-247	ANSI C63.10-2020+Cor. 1:2023+C63.10a:2024	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 Viavi Solutions Inc Quad Wavelength Power Meter, Model No. DCX-760, Serial No. XDCM0044750017, did fully conform to the selected requirements of FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247, FCC "Code of Federal Regulations" Title 47 Part 15, Subpart E, Section 15.407 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, FCC "Code of Federal Regulations" Title 47 Part 15, Subpart E, Section 15.407 and Innovation, Science, and Economic Development Canada, RSS-247 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



DCX-760



DCX-760

18. Equipment List

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Due Date
APW17	Preamplifier	Planar	PE2-36-26D540G-5R0-10-12-292FF	PL30297/2039	26.5-40GHz	3/30/2026	3/30/2027
APW18	Preamplifier	Planar	PE2-30-20G20R6G-3R0-10-12-SFF	PL34312/2148	18-26.5GHz	3/31/2026	3/31/2027
APW3	Preamplifier	Planar	PE2-35-120-5R0-10-12	PL2924	1-18GHz	3/17/2026	3/17/2027
GSE2	SIGNAL GENERATOR (40GHZ)	ROHDE & SCHWARZ	SMB100A	183293	100KHZ-40GHZ	3/7/2025	3/7/2027
NHG1	STANDARD GAIN HORN ANTENNA	NARDA	638	---	18-26.5GHZ	NOTE 1	
NHH1	STANDARD GAIN HORN ANTENNA	NARDA	V637	---	26.5-40GHZ	NOTE 1	
NWN1	DOUBLE RIDGED GUIDE ANTENNA	ETS LINDGREN	3116C	227802	10GHZ-40GHZ	9/16/2024	9/16/2026
NWQ2	DOUBLE RIDGED WAVEGUIDE ANTENNA	ETS LINDGREN	3117	66659	1GHZ-18GHZ	4/16/2026	4/16/2028
RBG3	EMI Analyzer	Rohde & Schwarz	ESW44	101592	2HZ-44GHZ	4/10/2026	4/10/2027
XPQ5	FILTER	K&L MICROWAVE	11SH10-9000/U2000-O/O	1	5000-5800 MHZ	9/16/2025	9/16/2027
XPR0	HIGH PASS FILTER	K&L MICROWAVE	11SH10-4800/X20000	001	4.8-20GHZ	9/16/2025	9/16/2027

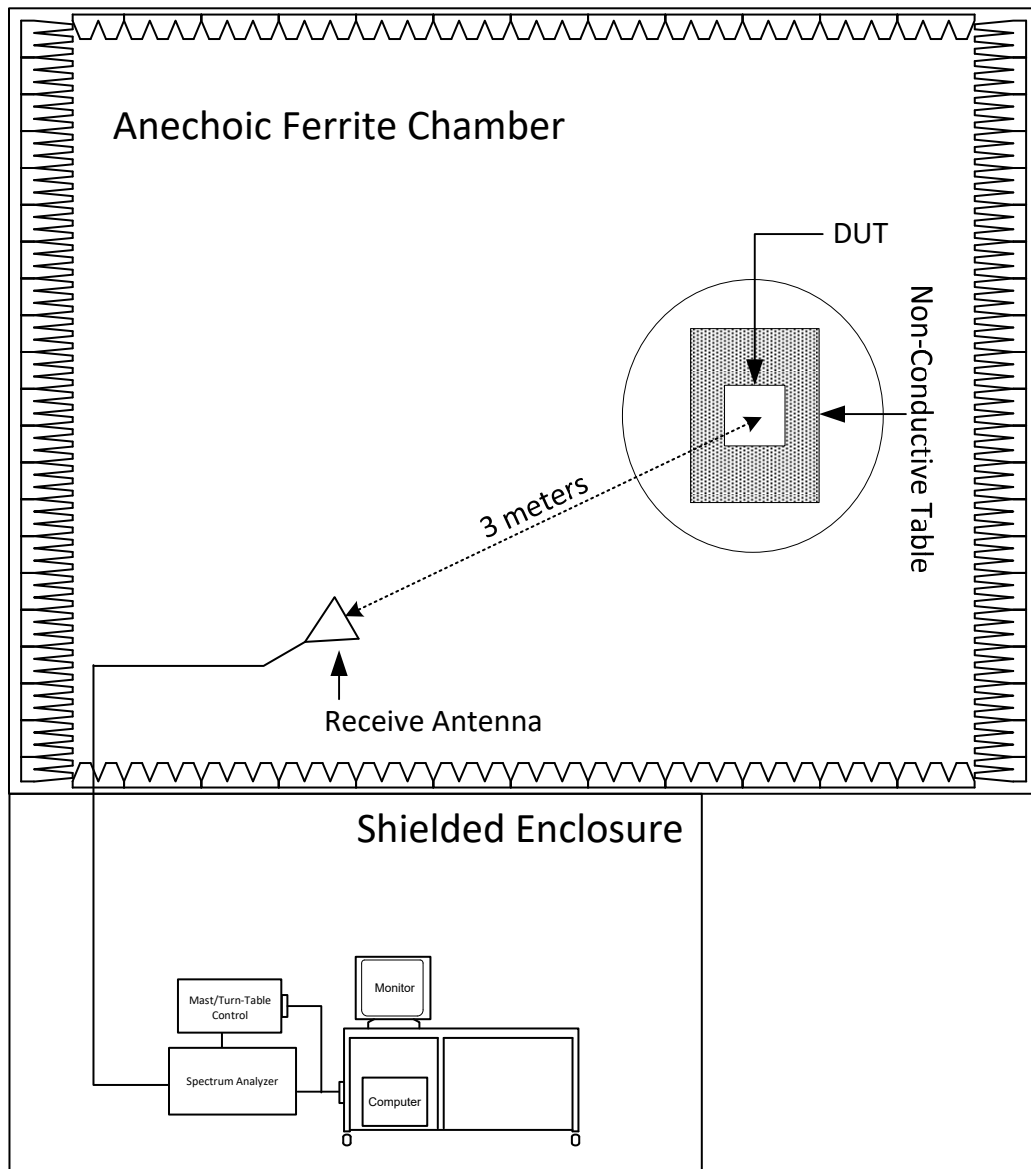
N/A: Not Applicable

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. Output Power

EUT Information	
Manufacturer	Viavi Solutions Inc
Test Item	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx

Test Site Information	
Setup Format	Tabletop
Type of Test Site	Semi-Anechoic Chamber
Test Site Used	R21F
Type of Antennas Used	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
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

Requirements
FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247(b)(3)
FCC "Code of Federal Regulations" Title 47 Part 15, Subpart E, Section 15.407 (a)
Innovation, Science, and Economic Development Canada, RSS-247

Procedure
Radiated measurements were performed in a 32ft. x 20ft. x 14ft. high shielded enclosure. All power lines and signal lines entering the enclosure pass through filters on the enclosure wall. 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 18.0GHz was investigated using a peak detector function. The final open field emission tests were then manually performed over the frequency range of 30MHz to 18.0GHz. The EUT was placed on the non-conductive stand and set to transmit. A double ridged waveguide 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 6dB bandwidth. The EUT was maximized for worst case emissions (or maximum output power) at the measuring antenna. The maximum meter reading was recorded. 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.

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Output Power
Frequency Tested	2402MHz BLE
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)
2402.00	H	66.21	3.44	32.04	0.00	101.68	6.38	36.00	-29.62
	V	70.80	3.44	32.04	0.00	106.27	10.97	36.00	-25.03

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Output Power
Frequency Tested	2412MHz WiFi
Notes	None

802.11ax

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)
2412.00	H	65.35	3.44	32.08	0.00	100.87	5.57	36.00	-30.43
	V	65.20	3.44	32.08	0.00	100.72	5.42	36.00	-30.58

802.11b

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)
2412.00	H	59.18	3.44	32.08	0.00	94.70	-0.60	36.00	-36.60
	V	58.91	3.44	32.08	0.00	94.43	-0.87	36.00	-36.87

802.11g

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)
2412.00	H	66.18	3.44	32.08	0.00	101.70	6.40	36.00	-29.60
	V	65.80	3.44	32.08	0.00	101.32	6.02	36.00	-29.98

802.11n

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)
2412.00	H	65.68	3.44	32.08	0.00	101.20	5.90	36.00	-30.10
	V	66.43	3.44	32.08	0.00	101.95	6.65	36.00	-29.35

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Output Power
Frequency Tested	2437MHz WiFi
Notes	None

802.11ax

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)
2437.00	H	65.09	3.47	32.18	0.00	100.73	5.43	36.00	-30.57
	V	63.14	3.47	32.18	0.00	98.78	3.48	36.00	-32.52

802.11b

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)
2437.00	H	59.28	3.47	32.18	0.00	94.92	-0.38	36.00	-36.38
	V	58.85	3.47	32.18	0.00	94.49	-0.81	36.00	-36.81

802.11g

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)
2437.00	H	65.89	3.47	32.18	0.00	101.53	6.23	36.00	-29.77
	V	64.99	3.47	32.18	0.00	100.63	5.33	36.00	-30.67

802.11n

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)
2437.00	H	66.52	3.47	32.18	0.00	102.16	6.86	36.00	-29.14
	V	63.22	3.47	32.18	0.00	98.86	3.56	36.00	-32.44

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Output Power
Frequency Tested	2462MHz WiFi
Notes	None

802.11ax

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)
2462.00	H	68.03	3.49	32.25	0.00	103.77	8.47	36.00	-27.53
	V	65.01	3.49	32.25	0.00	100.75	5.45	36.00	-30.55

802.11b

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)
2462.00	H	61.26	3.49	32.25	0.00	97.00	1.70	36.00	-34.30
	V	59.42	3.49	32.25	0.00	95.16	-0.14	36.00	-36.14

802.11g

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)
2462.00	H	68.29	3.49	32.25	0.00	104.03	8.73	36.00	-27.27
	V	65.95	3.49	32.25	0.00	101.69	6.39	36.00	-29.61

802.11n

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)
2462.00	H	69.36	3.49	32.25	0.00	105.10	9.80	36.00	-26.20
	V	66.92	3.49	32.25	0.00	102.66	7.36	36.00	-28.64

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Output Power
Frequency Tested	5180MHz WiFi
Notes	None

802.11a

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)
5180.00	H	71.8	7.2	34.6	0.0	113.6	18.6	36.0	-17.4
	V	67.2	7.2	34.6	0.0	109.0	14.0	36.0	-22.0

802.11ac

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)
5180.00	H	71.9	7.2	34.6	0.0	113.7	18.7	36.0	-17.3
	V	67.4	7.2	34.6	0.0	109.2	14.2	36.0	-21.8

802.11ax

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)
5180.00	H	71.0	7.2	34.6	0.0	112.8	17.8	36.0	-18.2
	V	67.9	7.2	34.6	0.0	109.7	14.7	36.0	-21.3

802.11n

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)
5180.00	H	72.2	7.2	34.6	0.0	114.0	19.0	36.0	-17.0
	V	69.3	7.2	34.6	0.0	111.1	16.1	36.0	-19.9

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Output Power
Frequency Tested	5300MHz WiFi
Notes	None

802.11a

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)
5300.00	H	70.0	7.3	34.9	0.0	112.2	17.2	30.0	-12.8
	V	68.6	7.3	34.9	0.0	110.7	15.7	30.0	-14.2

802.11ac

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)
5300.00	H	71.1	7.3	34.9	0.0	113.3	18.3	30.0	-11.7
	V	68.9	7.3	34.9	0.0	111.0	16.0	30.0	-13.9

802.11ax

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)
5300.00	H	71.5	7.3	34.9	0.0	113.7	18.7	30.0	-11.3
	V	68.3	7.3	34.9	0.0	110.5	15.5	30.0	-14.5

802.11n

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)
5300.00	H	72.0	7.3	34.9	0.0	114.2	19.2	30.0	-10.8
	V	67.9	7.3	34.9	0.0	110.1	15.1	30.0	-14.9

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Output Power
Frequency Tested	5785MHz WiFi
Notes	None

802.11a

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)
5785.00	H	70.1	7.8	35.1	0.0	113.0	18.0	36.0	-18.0
	V	68.7	7.8	35.1	0.0	111.6	16.6	36.0	-19.4

802.11ac

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)
5785.00	H	70.3	7.8	35.1	0.0	113.2	18.2	36.0	-17.8
	V	68.4	7.8	35.1	0.0	111.3	16.3	36.0	-19.7

802.11ax

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)
5785.00	H	69.6	7.8	35.1	0.0	112.5	17.5	36.0	-18.5
	V	67.1	7.8	35.1	0.0	110.0	15.0	36.0	-21.0

802.11n

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)
5785.00	H	70.2	7.8	35.1	0.0	113.1	18.1	36.0	-17.9
	V	68.2	7.8	35.1	0.0	111.1	16.1	36.0	-19.9

21. RF Radiated Emissions

EUT Information	
Manufacturer	Viavi Solutions Inc
Test Item	Quad Wavelength Power Meter
Model No.	DCX-760
Part No.	XDCM0044750017
Serial No.	Tx
Mode	Viavi Solutions Inc
Note	Radiated emissions measurements were performed at the frequency with the highest power measured.

Test Site Information	
Setup Format	Tabletop
Type of Test Site	Semi-Anechoic Chamber
Test Site Used	R21F
Type of Antennas Used	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
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

Requirements
FCC "Code of Federal Regulations" Title 47 Part 15, Subpart C, Section 15.247(d)
Innovation, Science, and Economic Development Canada, RSS-247
FCC "Code of Federal Regulations" Title 47 Part 15, Subpart E, Section 15.407(b)

Procedure

Radiated measurements were performed in a 32ft. x 20ft. x 14ft. high shielded enclosure. All power lines and signal lines entering the enclosure pass through filters on the enclosure wall.

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 1GHz to 18.0GHz was investigated using a peak detector function.

The final open field emission tests were then manually performed over the frequency range of 1GHz to 18.0GHz.

For FCC 15.247 and FCC 15.407 emissions in the restricted bands:

- 1) For all emissions not in the restricted bands, the following procedure was used:
 - a) The field strength of the fundamental was measured using a peak detector with a resolution bandwidth of 100 kHz.
 - b) The field strengths of all of the harmonics not in the restricted band were then measured using a double-ridged waveguide antenna. The EUT was placed on a high non-conductive stand. A peak detector with a resolution bandwidth of 100kHz.
 - 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.
- 2) For all emissions in the restricted bands, the following procedure was used:
 - a) The field strengths of all emissions above 1GHz were measured using a RMS (power averaging) detector with a resolution bandwidth of 1MHz.
 - b) 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.
 - c) Additionally, for all radiated emissions measurements above 1GHz the field strengths of all emissions above 1GHz were measured using a peak detector with a resolution bandwidth of 1MHz. All peak readings above 1GHz must be no greater than 20dB above the limits specified in

§15.209(a).

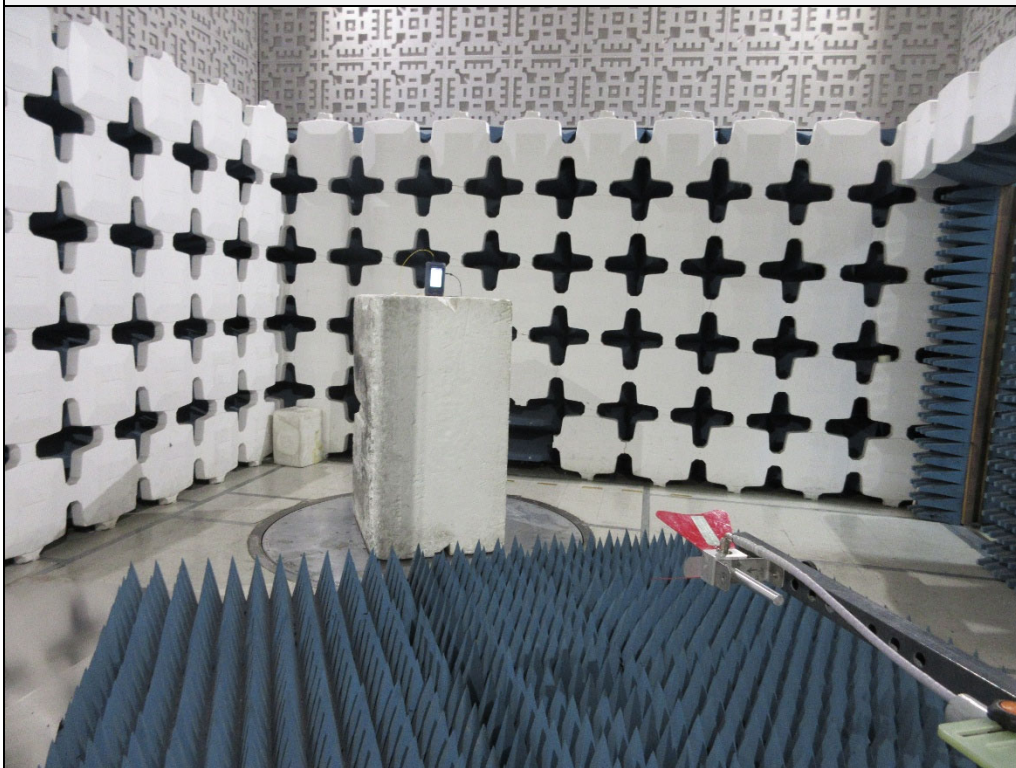
For Part 15.407:

The EUT was placed on the non-conductive stand and set to transmit. A bilog antenna, double ridged waveguide antenna for all measurements above 1GHz, was placed at a test distance of 3 meters from the EUT. The resolution bandwidth (RBW) of the spectrum analyzer was set to 100kHz, 1MHz for measurements above 1GHz. The EUT was maximized for worst case emissions (or maximum output power) at the measuring antenna. The maximum meter reading was recorded.

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.



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



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



Test Setup for Radiated Emissions: 18GHz to 26.5GHz, Horizontal Polarization



Test Setup for Radiated Emissions: 18GHz to 26.5GHz, Vertical Polarization



Test Setup for Radiated Emissions: 26.5GHz to 40GHz, Horizontal Polarization



Test Setup for Radiated Emissions: 26.5GHz to 40GHz, Vertical Polarization

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	2402MHz BLE
Notes	None

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)
4804.00	H	50.47	*	4.84	34.41	-40.56	49.16	287.06	5000.00	-24.82
	V	50.43	*	4.84	34.41	-40.56	49.12	285.74	5000.00	-24.86
12010.00	H	50.35	*	8.00	38.80	-40.42	56.73	686.03	5000.00	-17.25
	V	50.44	*	8.00	38.80	-40.42	56.82	693.18	5000.00	-17.16
19216.00	H	39.41	*	1.97	40.38	-26.74	55.02	563.60	5000.00	-18.96
	V	39.19	*	1.97	40.38	-26.74	54.80	549.50	5000.00	-19.18

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)
4804.00	H	39.72	*	4.84	34.41	-40.56	0.00	38.41	83.27	500.00	-15.57
	V	40.03	*	4.84	34.41	-40.56	0.00	38.72	86.29	500.00	-15.26
12010.00	H	40.19	*	8.00	38.80	-40.42	0.00	46.57	212.98	500.00	-7.41
	V	40.20	*	8.00	38.80	-40.42	0.00	46.58	213.23	500.00	-7.40
19216.00	H	29.76	*	1.97	40.38	-26.74	0.00	45.37	185.55	500.00	-8.61
	V	30.04	*	1.97	40.38	-26.74	0.00	45.65	191.63	500.00	-8.33

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)
2402.00	H	64.99		3.44	32.04	0.00	100.46	105497.18	NA	NA
	V	69.28		3.44	32.04	0.00	104.75	172878.45	NA	NA
7206.00	H	45.26		6.11	35.84	-40.78	46.43	209.60	17287.85	-38.33
	V	43.10		6.11	35.84	-40.78	44.27	163.45	17287.85	-40.49
9608.00	H	40.15	*	6.81	36.85	-40.75	43.05	142.13	17287.85	-41.70
	V	39.93	*	6.81	36.85	-40.75	42.83	138.58	17287.85	-41.92
14412.00	H	40.28	*	8.71	40.50	-40.31	49.19	287.91	17287.85	-35.57
	V	39.14	*	8.71	40.50	-40.31	48.05	252.50	17287.85	-36.71
16814.00	H	39.78	*	9.41	42.56	-39.75	52.00	398.33	17287.85	-32.75
	V	38.85	*	9.41	42.56	-39.75	51.07	357.89	17287.85	-33.68
21618.00	H	29.10	*	2.15	40.56	-25.50	46.30	206.63	17287.85	-38.45
	V	26.90	*	2.15	40.56	-25.50	44.10	160.40	17287.85	-40.65
24020.00	H	27.57	*	2.29	40.62	-25.64	44.84	174.67	17287.85	-39.91
	V	27.32	*	2.29	40.62	-25.64	44.59	169.72	17287.85	-40.16

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	2462MHz WiFi, 802.11ax
Notes	None

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)
4924.00	H	50.79	*	4.89	34.67	-40.55	49.80	308.92	5000.00	-24.18
	V	51.05	*	4.89	34.67	-40.55	50.06	318.31	5000.00	-23.92
7386.00	H	50.04	*	6.20	35.75	-40.79	51.20	363.24	5000.00	-22.78
	V	49.98	*	6.20	35.75	-40.79	51.14	360.74	5000.00	-22.84
12310.00	H	50.46	*	8.00	38.82	-40.39	56.88	698.35	5000.00	-17.10
	V	50.99	*	8.00	38.82	-40.39	57.41	742.29	5000.00	-16.57
19696.00	H	38.06	*	2.11	40.40	-26.74	53.83	491.28	5000.00	-20.15
	V	38.05	*	2.11	40.40	-26.74	53.82	490.72	5000.00	-20.16
22158.00	H	40.24	*	1.99	40.58	-25.50	57.32	734.17	5000.00	-16.66
	V	39.63	*	1.99	40.58	-25.50	56.71	684.38	5000.00	-17.27

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)
4924.00	H	39.93	*	4.89	34.67	-40.55	0.00	38.94	88.48	500.00	-15.04
	V	39.94	*	4.89	34.67	-40.55	0.00	38.95	88.58	500.00	-15.03
7386.00	H	39.44	*	6.20	35.75	-40.79	0.00	40.60	107.20	500.00	-13.38
	V	39.26	*	6.20	35.75	-40.79	0.00	40.42	105.00	500.00	-13.56
12310.00	H	40.18	*	8.00	38.82	-40.39	0.00	46.60	213.83	500.00	-7.38
	V	40.16	*	8.00	38.82	-40.39	0.00	46.58	213.34	500.00	-7.40
19696.00	H	28.71	*	2.11	40.40	-26.74	0.00	44.48	167.43	500.00	-9.50
	V	28.68	*	2.11	40.40	-26.74	0.00	44.45	166.85	500.00	-9.53
22158.00	H	29.80	*	1.99	40.58	-25.50	0.00	46.88	220.70	500.00	-7.10
	V	29.90	*	1.99	40.58	-25.50	0.00	46.98	223.25	500.00	-7.00

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)
2462.00	H	43.44		3.49	32.25	0.00	79.18	9095.88	NA	NA
	V	40.60		3.49	32.25	0.00	76.34	6559.10	NA	NA
9848.00	H	39.86	*	6.93	37.13	-40.72	43.20	144.60	909.59	-15.97
	V	39.94	*	6.93	37.13	-40.72	43.28	145.94	909.59	-15.89
14772.00	H	39.12	*	8.89	40.27	-40.25	48.03	251.97	909.59	-11.15
	V	39.26	*	8.89	40.27	-40.25	48.17	256.07	909.59	-11.01
17234.00	H	38.68	*	9.62	42.30	-39.57	51.04	356.39	909.59	-8.14
	V	39.71	*	9.62	42.30	-39.57	52.07	401.26	909.59	-7.11
24620.00	H	28.06	*	2.20	40.64	-25.64	45.26	183.29	909.59	-13.91
	V	27.18	*	2.20	40.64	-25.64	44.38	165.63	909.59	-14.79

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	2462MHz WiFi, 802.11b
Notes	None

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)
4924.00	H	50.57	*	4.89	34.67	-40.55	49.58	301.20	5000.00	-24.40
	V	51.38	*	4.89	34.67	-40.55	50.39	330.64	5000.00	-23.59
7386.00	H	50.46	*	6.20	35.75	-40.79	51.62	381.24	5000.00	-22.36
	V	49.90	*	6.20	35.75	-40.79	51.06	357.43	5000.00	-22.92
12310.00	H	50.45	*	8.00	38.82	-40.39	56.87	697.55	5000.00	-17.11
	V	49.98	*	8.00	38.82	-40.39	56.40	660.80	5000.00	-17.58
19696.00	H	38.10	*	2.11	40.40	-26.74	53.87	493.55	5000.00	-20.11
	V	37.86	*	2.11	40.40	-26.74	53.63	480.10	5000.00	-20.35
22158.00	H	38.87	*	1.99	40.58	-25.50	55.95	627.05	5000.00	-18.03
	V	39.68	*	1.99	40.58	-25.50	56.76	688.33	5000.00	-17.22

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)
4924.00	H	40.37	*	4.89	34.67	-40.55	0.00	39.38	93.08	500.00	-14.60
	V	40.60	*	4.89	34.67	-40.55	0.00	39.61	95.58	500.00	-14.37
7386.00	H	40.10	*	6.20	35.75	-40.79	0.00	41.26	115.66	500.00	-12.72
	V	39.82	*	6.20	35.75	-40.79	0.00	40.98	111.99	500.00	-13.00
12310.00	H	39.89	*	8.00	38.82	-40.39	0.00	46.31	206.81	500.00	-7.67
	V	40.02	*	8.00	38.82	-40.39	0.00	46.44	209.93	500.00	-7.54
19696.00	H	28.57	*	2.11	40.40	-26.74	0.00	44.34	164.75	500.00	-9.64
	V	28.39	*	2.11	40.40	-26.74	0.00	44.16	161.37	500.00	-9.82
22158.00	H	30.03	*	1.99	40.58	-25.50	0.00	47.11	226.62	500.00	-6.87
	V	30.02	*	1.99	40.58	-25.50	0.00	47.10	226.36	500.00	-6.88

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)
2462.00	H	47.80		3.49	32.25	0.00	83.54	15026.04	NA	NA
	V	45.92		3.49	32.25	0.00	81.66	12101.65	NA	NA
9848.00	H	39.35	*	6.93	37.13	-40.72	42.69	136.36	1502.60	-20.84
	V	39.40	*	6.93	37.13	-40.72	42.74	137.14	1502.60	-20.79
14772.00	H	40.58	*	8.89	40.27	-40.25	49.49	298.10	1502.60	-14.05
	V	40.74	*	8.89	40.27	-40.25	49.65	303.64	1502.60	-13.89
17234.00	H	39.24	*	9.62	42.30	-39.57	51.60	380.12	1502.60	-11.94
	V	39.52	*	9.62	42.30	-39.57	51.88	392.58	1502.60	-11.66
24620.00	H	26.56	*	2.20	40.64	-25.64	43.76	154.22	1502.60	-19.77
	V	26.77	*	2.20	40.64	-25.64	43.97	157.99	1502.60	-19.56

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	2462MHz WiFi, 802.11g
Notes	None

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)
4924.00	H	50.63	*	4.89	34.67	-40.55	49.64	303.29	5000.00	-24.34
	V	49.79	*	4.89	34.67	-40.55	48.80	275.33	5000.00	-25.18
7386.00	H	49.26	*	6.20	35.75	-40.79	50.42	332.04	5000.00	-23.56
	V	48.85	*	6.20	35.75	-40.79	50.01	316.73	5000.00	-23.97
12310.00	H	49.94	*	8.00	38.82	-40.39	56.36	657.77	5000.00	-17.62
	V	50.23	*	8.00	38.82	-40.39	56.65	680.10	5000.00	-17.33
19696.00	H	37.51	*	2.11	40.40	-26.74	53.28	461.14	5000.00	-20.70
	V	38.46	*	2.11	40.40	-26.74	54.23	514.44	5000.00	-19.75
22158.00	H	38.69	*	1.99	40.58	-25.50	55.77	614.18	5000.00	-18.21
	V	39.54	*	1.99	40.58	-25.50	56.62	677.33	5000.00	-17.36

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)
4924.00	H	39.56	*	4.89	34.67	-40.55	0.00	38.57	84.79	500.00	-15.41
	V	39.20	*	4.89	34.67	-40.55	0.00	38.21	81.35	500.00	-15.77
7386.00	H	38.71	*	6.20	35.75	-40.79	0.00	39.87	98.56	500.00	-14.11
	V	38.67	*	6.20	35.75	-40.79	0.00	39.83	98.11	500.00	-14.15
12310.00	H	39.47	*	8.00	38.82	-40.39	0.00	45.89	197.05	500.00	-8.09
	V	39.36	*	8.00	38.82	-40.39	0.00	45.78	194.57	500.00	-8.20
19696.00	H	28.98	*	2.11	40.40	-26.74	0.00	44.75	172.72	500.00	-9.23
	V	28.34	*	2.11	40.40	-26.74	0.00	44.11	160.45	500.00	-9.87
22158.00	H	29.01	*	1.99	40.58	-25.50	0.00	46.09	201.51	500.00	-7.89
	V	29.57	*	1.99	40.58	-25.50	0.00	46.65	214.93	500.00	-7.33

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)
2462.00	H	46.30		3.49	32.25	0.00	82.04	12642.84	NA	NA
	V	44.71		3.49	32.25	0.00	80.45	10527.97	NA	NA
9848.00	H	38.95	*	6.93	37.13	-40.72	42.29	130.22	1264.28	-19.74
	V	38.89	*	6.93	37.13	-40.72	42.23	129.32	1264.28	-19.80
14772.00	H	39.76	*	8.89	40.27	-40.25	48.67	271.24	1264.28	-13.37
	V	39.92	*	8.89	40.27	-40.25	48.83	276.28	1264.28	-13.21
17234.00	H	39.19	*	9.62	42.30	-39.57	51.55	377.94	1264.28	-10.49
	V	38.83	*	9.62	42.30	-39.57	51.19	362.60	1264.28	-10.85
24620.00	H	26.83	*	2.20	40.64	-25.64	44.03	159.08	1264.28	-18.00
	V	26.39	*	2.20	40.64	-25.64	43.59	151.23	1264.28	-18.44

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	2462MHz WiFi, 802.11n
Notes	None

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)
4924.00	H	50.25	*	4.89	34.67	-40.55	49.26	290.30	5000.00	-24.72
	V	50.27	*	4.89	34.67	-40.55	49.28	290.97	5000.00	-24.70
7386.00	H	49.58	*	6.20	35.75	-40.79	50.74	344.50	5000.00	-23.24
	V	49.63	*	6.20	35.75	-40.79	50.79	346.49	5000.00	-23.19
12310.00	H	50.09	*	8.00	38.82	-40.39	56.51	669.23	5000.00	-17.47
	V	49.96	*	8.00	38.82	-40.39	56.38	659.28	5000.00	-17.60
19696.00	H	38.19	*	2.11	40.40	-26.74	53.96	498.69	5000.00	-20.02
	V	38.46	*	2.11	40.40	-26.74	54.23	514.44	5000.00	-19.75
22158.00	H	40.33	*	1.99	40.58	-25.50	57.41	741.82	5000.00	-16.57
	V	39.68	*	1.99	40.58	-25.50	56.76	688.33	5000.00	-17.22

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)
4924.00	H	40.14	*	4.89	34.67	-40.55	0.00	39.15	90.65	500.00	-14.83
	V	40.16	*	4.89	34.67	-40.55	0.00	39.17	90.86	500.00	-14.81
7386.00	H	39.24	*	6.20	35.75	-40.79	0.00	40.40	104.76	500.00	-13.58
	V	39.61	*	6.20	35.75	-40.79	0.00	40.77	109.32	500.00	-13.21
12310.00	H	39.70	*	8.00	38.82	-40.39	0.00	46.12	202.34	500.00	-7.86
	V	0.00	*	8.00	38.82	-40.39	0.00	6.42	2.09	500.00	-47.56
19696.00	H	28.40	*	2.11	40.40	-26.74	0.00	44.17	161.56	500.00	-9.81
	V	28.64	*	2.11	40.40	-26.74	0.00	44.41	166.09	500.00	-9.57
22158.00	H	29.85	*	1.99	40.58	-25.50	0.00	46.93	221.97	500.00	-7.05
	V	29.78	*	1.99	40.58	-25.50	0.00	46.86	220.19	500.00	-7.12
2483.50	H	15.10	*	3.50	32.29	0.00	0.00	50.89	350.46	500.00	-3.09
	V	15.76	*	3.50	32.29	0.00	0.00	51.55	378.12	500.00	-2.43

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)
2462.00	H	45.62		3.49	32.25	0.00	81.36	11690.81	NA	NA
	V	42.39		3.49	32.25	0.00	78.13	8060.18	NA	NA
9848.00	H	38.86	*	6.93	37.13	-40.72	42.20	128.88	1169.08	-19.15
	V	40.05	*	6.93	37.13	-40.72	43.39	147.80	1169.08	-17.96
14772.00	H	40.20	*	8.89	40.27	-40.25	49.11	285.34	1169.08	-12.25
	V	39.91	*	8.89	40.27	-40.25	48.82	275.97	1169.08	-12.54
17234.00	H	39.84	*	9.62	42.30	-39.57	52.20	407.31	1169.08	-9.16
	V	39.24	*	9.62	42.30	-39.57	51.60	380.12	1169.08	-9.76
24620.00	H	29.22	*	2.20	40.64	-25.64	46.42	209.47	1169.08	-14.93
	V	28.46	*	2.20	40.64	-25.64	45.66	191.92	1169.08	-15.69

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	5180MHz WiFi 802.11a
Notes	None

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 (dBm)
15540.00	H	49.2	*	9.0	40.4	-40.2	58.5	840.1	5000.0	-15.5
	V	49.4	*	9.0	40.4	-40.2	58.7	859.6	5000.0	-15.3
20720.00	H	35.9	*	2.3	40.1	-30.0	48.3	259.8	5000.0	-25.7
	V	36.5	*	2.3	40.1	-30.0	48.9	277.5	5000.0	-25.1

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)
15540.00	H	39.1	*	9.0	40.4	-40.2	0.0	48.4	262.3	500.0	-5.6
	V	39.2	*	9.0	40.4	-40.2	0.0	48.4	264.4	500.0	-5.5
20720.00	H	27.0	*	2.3	40.1	-30.0	0.0	39.4	93.2	500.0	-14.6
	V	27.6	*	2.3	40.1	-30.0	0.0	40.0	99.7	500.0	-14.0

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 EIRP (dBm)	Limit (dBm)	Margin (dBm)
10360.00	H	39.2	*	7.2	37.6	-40.6	43.4	-51.8	-27.0	-24.8
	V	39.1	*	7.2	37.6	-40.6	43.3	-51.9	-27.0	-24.9
25900.00	H	27.1	*	2.2	40.7	-31.5	38.6	-56.6	-27.0	-29.6
	V	27.0	*	2.2	40.7	-31.5	38.4	-56.8	-27.0	-29.8
31080.00	H	33.3	*	1.9	43.9	-36.5	42.6	-52.6	-27.0	-25.6
	V	33.4	*	1.9	43.9	-36.5	42.6	-52.6	-27.0	-25.6
36260.00	H	32.9	*	2.1	44.1	-35.5	43.5	-51.7	-27.0	-24.7
	V	33.7	*	2.1	44.1	-35.5	44.4	-50.8	-27.0	-23.8

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	5180MHz WiFi 802.11ac
Notes	None

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 (dBm)
15540.00	H	49.5	*	9.0	40.4	-40.2	58.7	862.6	5000.0	-15.3
	V	49.7	*	9.0	40.4	-40.2	58.9	884.7	5000.0	-15.0
20720.00	H	38.0	*	2.3	40.1	-30.0	50.4	329.4	5000.0	-23.6
	V	37.2	*	2.3	40.1	-30.0	49.6	301.4	5000.0	-24.4

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)
15540.00	H	39.1	*	9.0	40.4	-40.2	0.0	48.4	261.7	500.0	-5.6
	V	39.2	*	9.0	40.4	-40.2	0.0	48.5	265.3	500.0	-5.5
20720.00	H	27.7	*	2.3	40.1	-30.0	0.0	40.0	100.4	500.0	-13.9
	V	28.0	*	2.3	40.1	-30.0	0.0	40.4	104.9	500.0	-13.6

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 EIRP (dBm)	Limit (dBm)	Margin (dBm)
10360.00	H	38.9	*	7.2	37.6	-40.6	43.0	-52.2	-27.0	-25.2
	V	38.9	*	7.2	37.6	-40.6	43.1	-52.1	-27.0	-25.1
25900.00	H	27.2	*	2.2	40.7	-31.5	38.7	-56.5	-27.0	-29.5
	V	27.7	*	2.2	40.7	-31.5	39.2	-56.0	-27.0	-29.0
31080.00	H	34.6	*	1.9	43.9	-36.5	43.8	-51.4	-27.0	-24.4
	V	33.5	*	1.9	43.9	-36.5	42.7	-52.5	-27.0	-25.5
36260.00	H	32.8	*	2.1	44.1	-35.5	43.5	-51.7	-27.0	-24.7
	V	32.8	*	2.1	44.1	-35.5	43.4	-51.8	-27.0	-24.8

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	5300MHz WiFi 802.11ax
Notes	None

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 (dBm)
10600.00	H	50.1	*	7.3	37.9	-40.5	54.8	547.3	5000.0	-19.2
	V	50.0	*	7.3	37.9	-40.5	54.6	537.3	5000.0	-19.4
15900.00	H	49.5	*	9.0	41.0	-40.1	59.4	928.1	5000.0	-14.6
	V	50.0	*	9.0	41.0	-40.1	59.9	986.5	5000.0	-14.1
21200.00	H	36.8	*	2.3	40.2	-30.0	49.3	293.0	5000.0	-24.6
	V	36.9	*	2.3	40.2	-30.0	49.4	296.1	5000.0	-24.6
31800.00	H	44.7	*	1.9	43.9	-36.5	54.1	505.0	5000.0	-19.9
	V	44.5	*	1.9	43.9	-36.5	53.8	492.4	5000.0	-20.1

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)
10600.00	H	39.8	*	7.3	37.9	-40.5	0.0	44.4	166.1	500.0	-9.6
	V	39.8	*	7.3	37.9	-40.5	0.0	44.4	166.8	500.0	-9.5
15900.00	H	40.0	*	9.0	41.0	-40.1	0.0	49.9	313.0	500.0	-4.1
	V	39.6	*	9.0	41.0	-40.1	0.0	49.5	298.6	500.0	-4.5
21200.00	H	28.0	*	2.3	40.2	-30.0	0.0	40.5	106.0	500.0	-13.5
	V	27.9	*	2.3	40.2	-30.0	0.0	40.4	105.3	500.0	-13.5
31800.00	H	34.5	*	1.9	43.9	-36.5	0.0	43.8	155.3	500.0	-10.2
	V	34.4	*	1.9	43.9	-36.5	0.0	43.7	153.4	500.0	-10.3

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 EIRP (dBm)	Limit (dBm)	Margin (dBm)
26500.00	H	28.3	*	1.7	43.7	-36.2	37.5	-57.7	-27.0	-30.7
	V	27.9	*	1.7	43.7	-36.2	37.1	-58.1	-27.0	-31.1
37100.00	H	32.5	*	2.1	44.1	-35.5	43.3	-51.9	-27.0	-24.9
	V	33.2	*	2.1	44.1	-35.5	44.0	-51.2	-27.0	-24.2

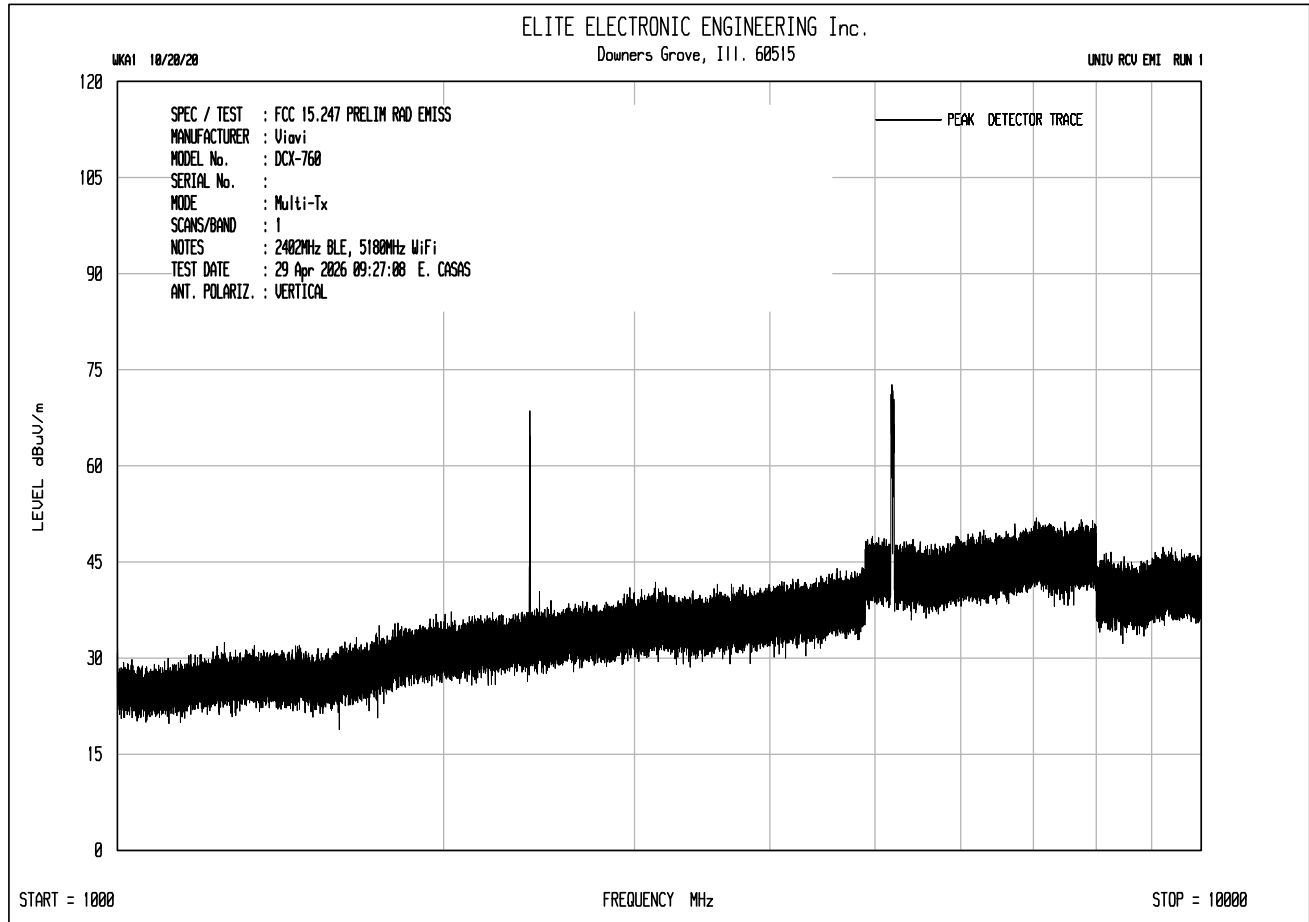
Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	5180MHz WiFi 802.11n
Notes	None

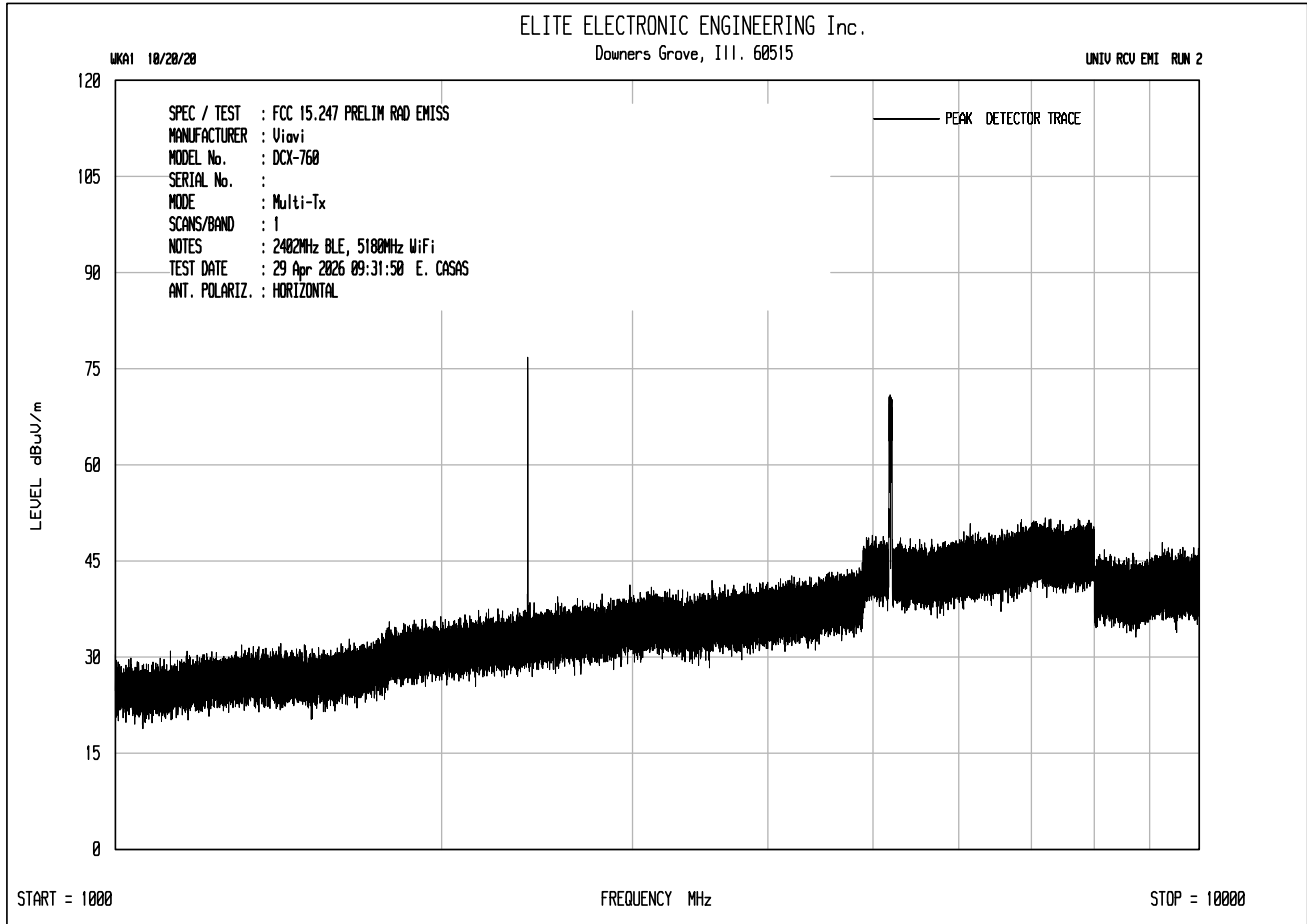
Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total at 3m (dBμV/m)	Peak Total at 3m (μV/m)	Peak Limit at 3m (μV/m)	Margin (dBm)
15540.00	H	49.5	*	9.0	40.4	-40.2	58.8	866.6	5000.0	-15.2
	V	49.8	*	9.0	40.4	-40.2	59.0	893.9	5000.0	-15.0
20720.00	H	36.8	*	2.3	40.1	-30.0	49.2	287.9	5000.0	-24.8
	V	37.3	*	2.3	40.1	-30.0	49.7	306.0	5000.0	-24.3

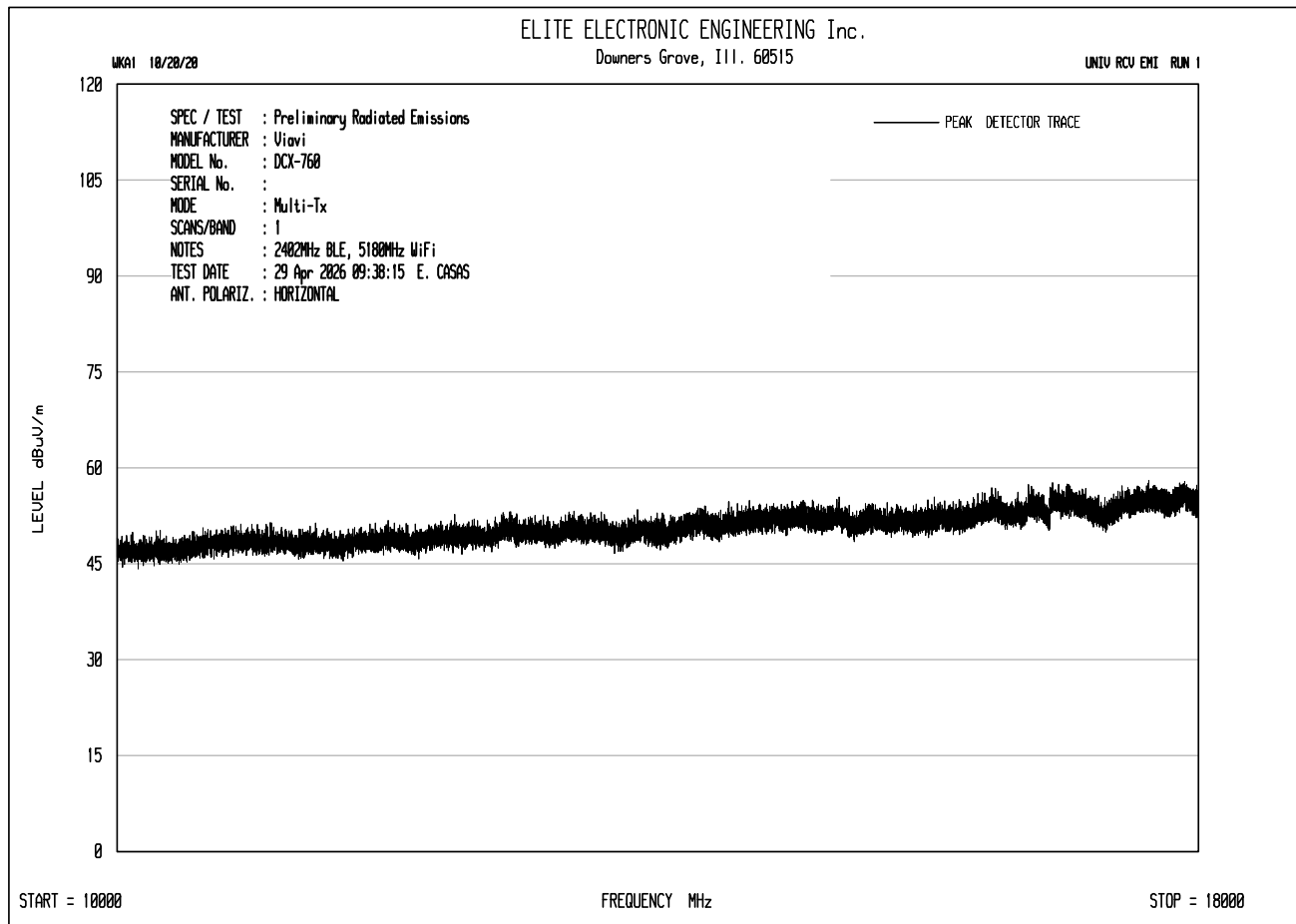
Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle Factor (dB)	Average Total at 3m (dBμV/m)	Average Total at 3m (μV/m)	Average Limit at 3m (μV/m)	Margin (dB)
15540.00	H	39.6	*	9.0	40.4	-40.2	0.0	48.8	275.9	500.0	-5.2
	V	39.2	*	9.0	40.4	-40.2	0.0	48.5	265.3	500.0	-5.5
20720.00	H	27.8	*	2.3	40.1	-30.0	0.0	40.1	101.7	500.0	-13.8
	V	27.5	*	2.3	40.1	-30.0	0.0	39.9	98.9	500.0	-14.1

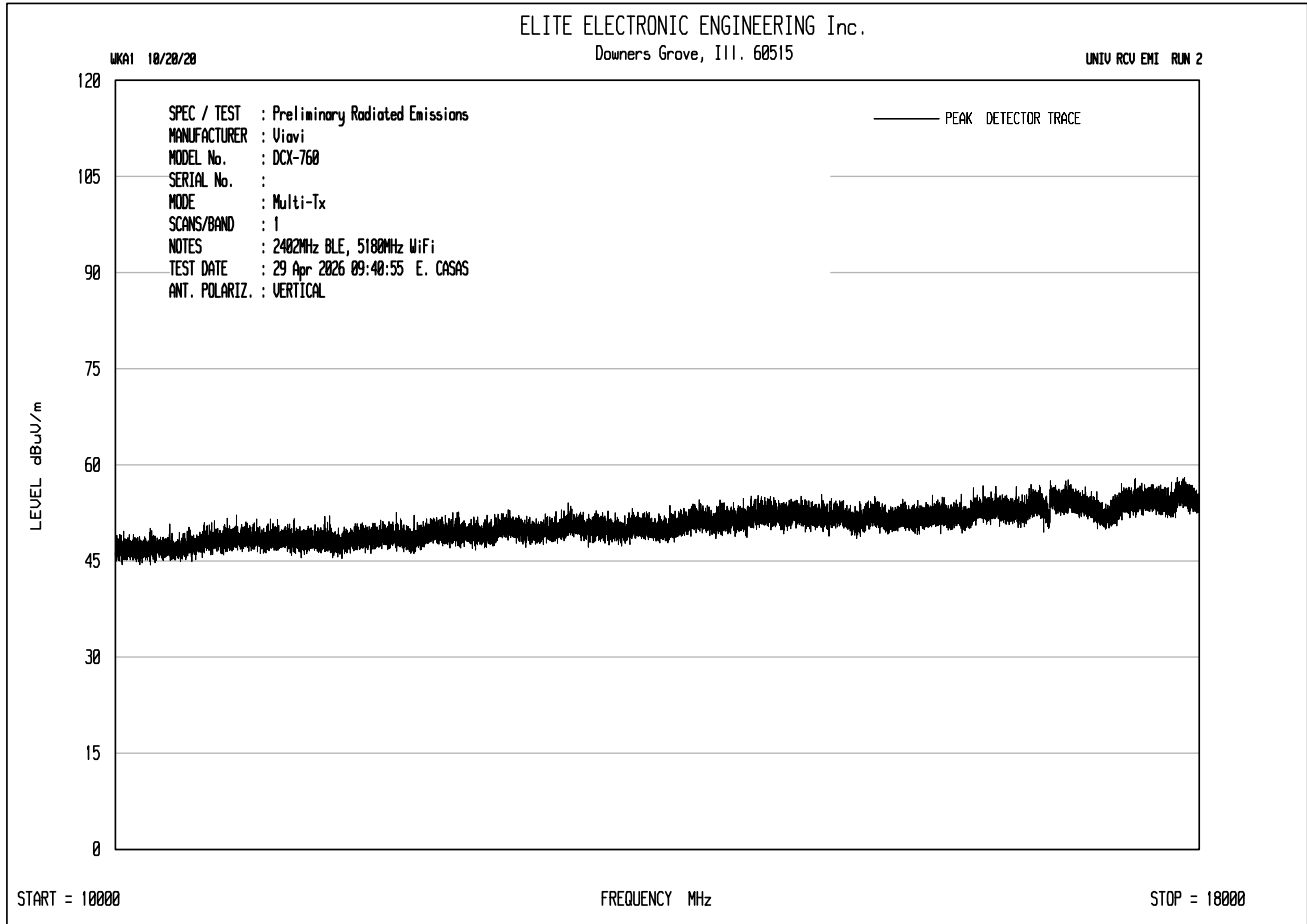
Freq (MHz)	Ant Pol	Meter Reading (dBμV)	Ambient	Cable Factor (dB)	Antenna Factor (dB/m)	Pre Amp (dB)	Peak Total at 3m (dBμV/m)	Peak EIRP (dBm)	Limit (dBm)	Margin (dBm)
10360.00	H	38.8	*	7.2	37.6	-40.6	42.9	-52.3	-27.0	-25.3
	V	39.3	*	7.2	37.6	-40.6	43.4	-51.8	-27.0	-24.8
25900.00	H	27.2	*	2.2	40.7	-31.5	38.7	-56.5	-27.0	-29.5
	V	27.3	*	2.2	40.7	-31.5	38.8	-56.4	-27.0	-29.4
31080.00	H	33.6	*	1.9	43.9	-36.5	42.9	-52.3	-27.0	-25.3
	V	34.1	*	1.9	43.9	-36.5	43.3	-51.9	-27.0	-24.9
36260.00	H	32.9	*	2.1	44.1	-35.5	43.5	-51.7	-27.0	-24.7
	V	32.9	*	2.1	44.1	-35.5	43.6	-51.6	-27.0	-24.6

Test Details	
Manufacturer	Viavi Solutions Inc
EUT	Quad Wavelength Power Meter
Model No.	DCX-760
Serial No.	XDCM0044750017
Mode	Multi-Tx
Test	Radiated Emissions – Spurious Emissions
Frequency Tested	2402MHz BLE and 5180MHz 802.11n WiFi.
Notes	None









No Intermodulation Products Observed.

22. Scope of Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELITE ELECTRONIC ENGINEERING, INC.
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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

Test Technology:
Test Method(s)¹:

Radiated Emissions Anechoic
(Up to 6 GHz)

CISPR 25 (2002, 2008), Section 6.4;
CISPR 25 (2016), Section 6.5; CISPR 25;
CS.00054, Section 5.6.3; CS.00244 Section 5.4.4;
GMW 3097, Section 3.3.1;
EMC-CS-2009.1 (RE 310); FMC1278 (RE310, RE320)

Vehicle Radiated Emissions

CISPR 12; CISPR 36; ICES-002;
ECE Regulation 10.06 Annex 4;
ECE Regulation 10.06 Annex 5

Bulk Current Injection (BCI)
(1 to 400MHz 500mA)

ISO 11452-4; CS.00054, Section 5.8.1;
CS.00244 Section 5.3.2;
GMW 3097, Section 3.4.1; SAE J1113-4;
EMC-CS-2009.1 (RI112); FMC1278 (RI112);
ECE Regulation 10.06 Annex 9

Radiated Immunity Anechoic
(Up to 6GHz and 200V/m)
(Including Radar Pulse 600V/m)

ISO 11452-2;
CS.00054, Section 5.8.2; CS.00244 Section 5.3.3;
GMW 3097, Section 3.4.2;
EMC-CS-2009.1 (RI114); FMC1278 (RI114); SAE J1113-21;
ECE Regulation 10.06 Annex 9

Radiated Immunity Magnetic Field

ISO 11452-8; FMC 1278 (RI140); CS.00244 Section 5.3.4

Radiated Immunity Reverb
(360MHz to 6GHz and 100V/m)

ISO/IEC 61000-4-21; GMW 3097, Section 3.4.3;
EMC-CS-2009.1 (RI114); FMC1278 (RI114);
ISO 11452-11

Radiated Immunity
(Portable Transmitters)
(Up to 6GHz and 20W)

ISO 11452-9;
CS.00244 Section 5.3.5;
EMC-CS-2009.1 (RI115); FMC1278 (RI115);
GMW 3097, Sec 3.4.4

Vehicle Radiated Immunity (ALSE)

ISO 11451-2; ECE Regulation 10.06 Annex 6

Vehicle Product Specific EMC Standards

EN 14982; EN ISO 13309; ISO 13766; EN 50498;
EC Regulation No. 2015/208; EN 55012

Electrical Loads

ISO 16750-2

Stripline

ISO 11452-5

Emissions

Radiated and Conducted
(3m Semi-anechoic chamber,
up to 40 GHz)

47 CFR, FCC Part 15 B (using ANSI C63.4:2014);
47 CFR, FCC Part 18 (using FCC MP-5:1986);
ICES-001; ICES-003; ICES-005;
IEC/CISPR 11, Ed. 4.1 (2004-06); AS/NZS CISPR 11 (2004);
IEC/CISPR 11 Ed 5 (2009-05) + A1 (2010);
KN 11 (2008-5) with RRL Notice No. 2008-3 (May 20, 2008);
CISPR 11; EN 55011; KS C 9811; CNS 13803 (1997, 2003);
CISPR 14-1; EN 55014-1; AS/NZS CISPR 14.1;

Test Technology:

Radiated and Conducted (cont'd)
(3m Semi-anechoic chamber,
up to 40 GHz)

Test Method(s)¹:

CISPR 16-2-1 (2008); CISPR 16-2-1; KS C 9814-1; KN 14-1;
IEC/CISPR 22 (1997);
EN 55022 (1998) + A1(2000);
EN 55022 (1998) + A1(2000) + A2(2003); EN 55022 (2006);
IEC/CISPR 22 (2008-09); AS/NZS CISPR 22 (2004);
AS/NZS CISPR 22, 3rd Edition (2006); KN 22 (up to 6 GHz);
CNS 13438 (up to 6 GHz); VCCI V-3 (up to 6 GHz);
CISPR 32; EN 55032; KS C 9832; KN 32;
ECE Regulation 10.06 Annex 7 (Broadband);
ECE Regulation 10.06 Annex 8 (Narrowband);
ECE Regulation 10.06 Annex 13 (Conducted);
ECE Regulation 10.06 Annex 14 (Conducted)

Cellular Radiated Spurious Emissions

ETSI TS 151 010-1 GSM; 3GPP TS 51.010-1, Sec 12;
ETSI TS 134 124 UMTS; 3GPP TS 34.124;
ETSI TS 136 124 LTE; E-UTRA; 3GPP TS 36.124

Current Harmonics

IEC 61000-3-2; IEC 61000-3-12;
EN 61000-3-2; KN 61000-3-2;
KS C 9610-3-2; ECE Regulation 10.06 Annex 11

Flicker and Fluctuations

IEC 61000-3-3; IEC 61000-3-11;
EN 61000-3-3; KN 61000-3-3;
KS C 9610-3-3; ECE Regulation 10.06 Annex 12

Immunity

Electrostatic Discharge

IEC 61000-4-2, Ed. 1.2 (2001);
IEC 61000-4-2 (1995) + A1(1998) + A2(2000);
EN 61000-4-2 (1995); EN 61000-4-2 (2009-05);
KN 61000-4-2 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
IEC 61000-4-2; EN 61000-4-2; KN 61000-4-2;
KS C 9610-4-2; IEEE C37.90.3 2001

Radiated Immunity

IEC 61000-4-3 (1995) + A1(1998) + A2(2000);
IEC 61000-4-3, Ed. 3.0 (2006-02);
IEC 61000-4-3, Ed. 3.2 (2010);
KN 61000-4-3 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
IEC 61000-4-3; EN 61000-4-3; KN 61000-4-3;
KS C 9610-4-3; IEEE C37.90.2 2004

Electrical Fast Transient/Burst

IEC 61000-4-4, Ed. 2.0 (2004-07);
IEC 61000-4-4, Ed. 2.1 (2011);
IEC 61000-4-4 (1995) + A1(2000) + A2(2001);
KN 61000-4-4 (2008-5);
RRL Notice No. 2008-5 (May 20, 2008);
IEC 61000-4-4; EN 61000-4-4; KN 61000-4-4;
KS C 9610-4-4; ECE Regulation 10.06 Annex 15

Test Technology:
Test Method(s)¹:

Surge

IEC 61000-4-5 (1995) + A1(2000);
IEC 61000-4-5, Ed 1.1 (2005-11);
EN 61000-4-5 (1995) + A1(2001);
KN 61000-4-5 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
IEC 61000-4-5; EN 61000-4-5; KN 61000-4-5;
KS C 9610-4-5;
IEEE C37.90.1 2012; IEEE STD C62.41.2 2002;
ECE Regulation 10.06 Annex 16

Conducted Immunity

IEC 61000-4-6 (1996) + A1(2000);
IEC 61000-4-6, Ed 2.0 (2006-05);
IEC 61000-4-6 Ed. 3.0 (2008);
KN 61000-4-6 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
EN 61000-4-6 (1996) + A1(2001); IEC 61000-4-6;
EN 61000-4-6; KN 61000-4-6; KS C 9610-4-6

Power Frequency Magnetic Field
Immunity (*Down to 3 A/m*)

IEC 61000-4-8 (1993) + A1(2000); IEC 61000-4-8 (2009);
EN 61000-4-8 (1994) + A1(2000);
KN 61000-4-8 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
IEC 61000-4-8; EN 61000-4-8; KN 61000-4-8; KS C 9610-4-8

Voltage Dips, Short Interrupts, and Line
Voltage Variations

IEC 61000-4-11, Ed. 2 (2004-03);
KN 61000-4-11 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
IEC 61000-4-11; EN 61000-4-11; KN 61000-4-11;
KS C 9610-4-11

Ring Wave

IEC 61000-4-12, Ed. 2 (2006-09);
EN 61000-4-12:2006;
IEC 61000-4-12; EN 61000-4-12; KN 61000-4-12;
IEEE STD C62.41.2 2002

Generic and Product Specific EMC
Standards

IEC/EN 61000-6-1; AS/NZS 61000-6-1; KN 61000-6-1;
KS C 9610-6-1; IEC/EN 61000-6-2; AS/NZS 61000-6-2;
KN 61000-6-2; KS C 9610-6-2; IEC/EN 61000-6-3;
AS/NZS 61000-6-3; KN 61000-6-3; KS C 9610-6-3;
IEC/EN 61000-6-4; AS/NZS 61000-6-4; KN 61000-6-4;
KS C 9610-6-4; EN 50130-4; EN 61326-1; EN 50121-3-2;
EN 12895; EN 50270; EN 50491-1; EN 50491-2; EN 50491-3;
EN 55015; EN 60730-1; EN 60945; IEC 60533;
EN 61326-2-6; EN 61800-3; IEC/CISPR 14-2; EN 55014-2;
AS/NZS CISPR 14.2; KN 14-2; KS C 9814-2;
IEC/CISPR 24; AS/NZS CISPR 24; EN 55024; KN 24;
IEC/CISPR 35; AS/NZS CISPR 35; EN 55035; KN 35;
KS C 9835; IEC 60601-1-2; JIS T0601-1-2; ANSI C63.27

Test Technology:
TxRx EMC Requirements
European Radio Test Standards
Canadian Radio Tests
Mexico Radio Tests
Japan Radio Tests
Taiwan Radio Tests
Australia/New Zealand Radio Tests
Hong Kong Radio Tests
Korean Radio Test Standards
Vietnam Radio Test Standards
Test Method(s)¹:

EN 301 489-1; EN 301 489-3; EN 301 489-9;
EN 301 489-17; EN 301 489-19; EN 301 489-20

ETSI EN 300 086-1; ETSI EN 300 086-2;
ETSI EN 300 113-1; ETSI EN 300 113-2;
ETSI EN 300 220-1; ETSI EN 300 220-2;
ETSI EN 300 220-3-1; ETSI EN 300 220-3-2;
ETSI EN 300 330-1; ETSI EN 300 330-2;
ETSI EN 300 440-1; ETSI EN 300 440-2;
ETSI EN 300 422-1; ETSI EN 300 422-2;
ETSI EN 300 328; ETSI EN 301 893;
ETSI EN 301 511; ETSI EN 301 908-1;
ETSI EN 908-2; ETSI EN 908-13;
ETSI EN 303 413; ETSI EN 302 502;
EN 303 340; EN 303 345-2; EN 303 345-3; EN 303 345-4

RSS-102; RSS-102.NS.MEAS;
SPR-002; RSS-111; RSS-112; RSS-117; RSS-119; RSS-123;
RSS-125; RSS-127; RSS-130; RSS-131; RSS-132; RSS-133;
RSS-134; RSS-135; RSS-137; RSS-139; RSS-140; RSS-141;
RSS-142; RSS-170; RSS-181; RSS-182; RSS-192; RSS-194;
RSS-195; RSS-196; RSS-197; RSS-198; RSS-199;
RSS-210 (up to 40 GHz); RSS-211 (up to 40 GHz);
RSS-213; RSS-215; RSS-216 (up to 40 GHz);
RSS-220 (up to 40 GHz); RSS-222; RSS-236; RSS-238;
RSS-243; RSS-244; RSS-247; RSS-248; RSS-252; RSS-287;
RSS-288; RSS-310; RSS-GEN

IFT-008-2015; NOM-208-SCFI-2016

Radio Law No. 131, Ordinance of MPT No. 37, 1981,
MIC Notification No. 88:2004, Table No. 22-11;
ARIB STD-T66, Regulation 18

LP-0002 (February 6, 2024)

AS/NZS 4268; Radiocommunications (Short Range Devices)
Standard (2014)

HKCA 1039 Issue 6; HKCA 1042; HKCA 1033 Issue 7;
HKCA 1061; HKCA 1008; HKCA 1043; HKCA 1057;
HKCA 1073

KN 301 489-1; KN 301 489-3; KN 301 489-9;
KN 301 489-17; KN 301 489-52; KS X 3124; KS X 3125;
KS X 3130; KS X 3126; KS X 3129

QCVN 47:2015/BTTTT; QCVN 54:2020/BTTTT;
QCVN 55:2011/BTTTT; QCVN 65:2013/BTTTT;
QCVN 73:2013/BTTTT; QCVN 74:2020/BTTTT;
QCVN 112:2017/BTTTT; QCVN 117:2020/BTTTT

Test Technology:
Test Method(s)¹:
Vietnam EMC Test Standards

QCVN 18:2014/BTTTT; QCVN 86:2019/BTTTT;
QCVN 96:2015/BTTTT; QCVN 118:2018/BTTTT

***Unlicensed Radio Frequency Devices
(3 Meter Semi-Anechoic Room)***

47 CFR FCC Part 15C, 15D, 15E, 15F, 15G, 15H
(using ANSI C63.10:2020, ANSI C63.17:2013 and
FCC KDB 905462 D02 (v02))

Licensed Radio Service Equipment

47 CFR FCC Parts 20, 22, 24, 25, 27, 30, 73, 74, 80, 87,
90, 95, 96, 97, 101 (using ANSI/TIA-603-E,
TIA-102.CAAA-E, ANSI C63.26:2015); ANSI/TIA-603-F

OTA (Over the Air) Performance

GSM, GPRS, EGPRS
UMTS (W-CDMA)
LTE Cat 0+, M1, NB1
A-GNSS for UMTS/GSM, LTE
Large Device/Laptop/Tablet Testing
Integrated Device Testing
WiFi 802.11 a/b/g/n/ac

CTIA Test Plan for Wireless Device Over-the-Air
Performance (Method for Measurement for Radiated Power
and Receiver Performance) V6.0²;
CTIA Test Plan for RF Performance Evaluation of WiFi
Mobile Converged Devices V4.0²
***Electrical Measurements and
Simulation***
AC Voltage / Current

(1mV to 5kV) 60 Hz
(0.1V to 250V) up to 500 MHz
(1μA to 150A) 60 Hz

FAA AC 150/5345-10;
FAA AC 150/5345-43;
FAA AC 150/5345-44;
FAA AC 150/5345-46;
FAA AC 150/5345-47;
FAA EB 67

DC Voltage / Current

(1mV to 15 kV) / (1μA to 10A)

Power Factor / Efficiency / Crest Factor
(Power to 30kW)

Resistance

(1mΩ to 4000MΩ)

Surge

(Up to 10 kV / 5 kA) (Combination
Wave and Ring Wave)

West Annex
1524 Centre Circle
Downers Grove, IL 60515

Test Technology:
Test Method(s)²:
Transient Immunity

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

**Transverse Electromagnetic (TEM)
Cell**

ISO 11452-3

Emissions

Current Harmonics

IEC 61000-3-2; IEC 61000-3-12;
EN 61000-3-2; KN 61000-3-2;
KS C 9610-3-2; ECE Regulation 10.06 Annex 11

Flicker and Fluctuations

IEC 61000-3-3; IEC 61000-3-11;
EN 61000-3-3; KN 61000-3-3;
KS C 9610-3-3; ECE Regulation 10.06 Annex 12

Immunity

Electrical Fast Transient/Burst

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IEC 61000-4-4, Ed. 2.1 (2011);
IEC 61000-4-4 (1995) + A1(2000) + A2(2001);
KN 61000-4-4 (2008-5);
RRL Notice No. 2008-5 (May 20, 2008);
IEC 61000-4-4; EN 61000-4-4; KN 61000-4-4;
KS C 9610-4-4; ECE Regulation 10.06 Annex 15

Surge

IEC 61000-4-5 (1995) + A1(2000);
IEC 61000-4-5, Ed 1.1 (2005-11);
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KN 61000-4-5 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
IEC 61000-4-5; EN 61000-4-5; KN 61000-4-5;
KS C 9610-4-5; IEEE C37.90.1 2012;
IEEE STD C62.41.2 2002; ECE Regulation 10.06 Annex 16

Conducted Immunity

IEC 61000-4-6 (1996) + A1(2000);
IEC 61000-4-6, Ed 2.0 (2006-05);
IEC 61000-4-6 Ed. 3.0 (2008);
KN 61000-4-6 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
EN 61000-4-6 (1996) + A1(2001); IEC 61000-4-6;

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Test Technology:
Test Method(s)²:

Power Frequency Magnetic Field
Immunity (*Down to 3 A/m*)

EN 61000-4-6; KN 61000-4-6; KS C 9610-4-6

IEC 61000-4-8 (1993) + A1(2000); IEC 61000-4-8 (2009);
EN 61000-4-8 (1994) + A1(2000);
KN 61000-4-8 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
IEC 61000-4-8; EN 61000-4-8; KN 61000-4-8; KS C 9610-4-8

Voltage Dips, Short Interrupts, and Line
Voltage Variations

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KN 61000-4-11 (2008-5);
RRL Notice No. 2008-4 (May 20, 2008);
IEC 61000-4-11; EN 61000-4-11; KN 61000-4-11;
KS C 9610-4-11

Ring Wave

IEC 61000-4-12, Ed. 2 (2006-09);
EN 61000-4-12:2006;
IEC 61000-4-12; EN 61000-4-12; KN 61000-4-12;
IEEE STD C62.41.2 2002

**Electrical Measurements and
Simulation**

AC Voltage / Current
(1mV to 5kV) 60 Hz
(0.1V to 250V) up to 500 MHz
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FAA AC 150/5345-10;
FAA AC 150/5345-43;
FAA AC 150/5345-44;
FAA AC 150/5345-46;
FAA AC 150/5345-47;
FAA EB 67

DC Voltage / Current
(1mV to 15 kV) / (1μA to 10A)

Power Factor / Efficiency / Crest Factor
(Power to 30kW)

Resistance
(1mΩ to 4000MΩ)

Surge
(Up to 10 kV / 5 kA) (Combination
Wave and Ring Wave)

On the following products and materials:

Telecommunications Terminal Equipment (TTE), Radio Equipment, Network Equipment, Information Technology Equipment (ITE), Automotive Electronic Equipment, Automotive Hybrid Electronic Devices, Maritime Navigation and Radio Communication Equipment and Systems, Vehicles, Boats and Internal Combustion Engine Driven Devices, Automotive, Aviation, and General Lighting Products, Medical Electrical Equipment, Motors, Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment, Household Appliances, Electric Tools, Low-voltage Switchgear and Control gear, Programmable Controllers, Electrical Equipment for Measurement, Control and Laboratory Use, Base Materials, Power and Data Transmission Cables and Connectors

¹ When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA R101 - General Requirements- Accreditation of Conformity Assessment Bodies.

² Accreditation to the requirements of the CTIA Certification Test Plan does not imply authorization by the CTIA Certification program. Please see the CTIA website <https://ctiacertification.org/test-labs/> for a listing of Authorized Test Labs (ATLs).

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1

Rule Subpart/Technology	Test Method	Maximum Frequency (MHz)
<u>Unintentional Radiators</u> Part 15B	ANSI C63.4:2014	40000
<u>Industrial, Scientific, and Medical Equipment</u> Part 18	FCC MP-5 (February 1986)	40000
<u>Intentional Radiators</u> Part 15C	ANSI C63.10:2013	40000
<u>Unlicensed Personal Communication Systems Devices</u> Part 15D	ANSI C63.17:2013	40000
<u>U-NII without DFS Intentional Radiators</u> Part 15E	ANSI C63.10:2013	40000
<u>U-NII with DFS Intentional Radiators</u> Part 15E	FCC KDB 905462 D02 (v02)	40000
<u>UWB Intentional Radiators</u> Part 15F	ANSI C63.10:2013	40000
<u>BPL Intentional Radiators</u> Part 15G	ANSI C63.10:2013	40000
<u>White Space Device Intentional Radiators</u> Part 15H	ANSI C63.10:2013	40000
<u>Commercial Mobile Services (FCC Licensed Radio Service Equipment)</u> Parts 22 (cellular), 24, 25 (below 3 GHz), and 27	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	40000

General Mobile Radio Services (FCC Licensed Radio Service Equipment)

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Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1

Rule Subpart/Technology	Test Method	Maximum Frequency (MHz)
Parts 22 (non-cellular), 90 (below 3 GHz), 95, 97, and 101 (below 3 GHz)	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	40000
<u>Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment)</u> Part 96	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	40000
<u>Maritime and Aviation Radio Services</u> Parts 80 and 87	ANSI/TIA-603-E; ANSI C63.26:2015	40000
<u>Microwave and Millimeter Bands Radio Services</u> Parts 25, 30, 74, 90 (above 3 GHz), 97 (above 3 GHz), and 101	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	40000
<u>Broadcast Radio Services</u> Parts 73 and 74 (below 3 GHz)	ANSI/TIA-603-E; TIA-102.CAAA-E; ANSI C63.26:2015	40000
<u>Signal Boosters</u> Part 20 (Wideband Consumer Signal Boosters, Provider-specific signal boosters, and Industrial Signal Boosters) Section 90.219	ANSI C63.26:2015	40000

Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (<https://apps.fcc.gov/oetcf/eas/>) for a listing of FCC approved laboratories.



Accredited Laboratory

A2LA has accredited

ELITE ELECTRONIC ENGINEERING INC.

Downers Grove, IL

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 14th day of August 2025.



Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1786.01
Valid to June 30, 2027

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.