



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

Element Materials Technology Jupiter, LLC (Melbourne-West)
284 West Drive, Suite B
Melbourne, FL 32904

has been assessed by ANAB
and meets the requirements of international standard

ISO/IEC 17025:2005

while demonstrating technical competence in the field of

TESTING

Refer to the accompanying Scope of Accreditation for information regarding the types of tests to which this accreditation applies.

AT-1777

Certificate Number


ANAB Approval

Certificate Valid: 05/02/2017-04/24/2019
Version No. 004 Issued: 05/02/2017



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. 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 January 2009).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Element Materials Technology Jupiter, LLC (Melbourne-West)

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TESTING

Valid to: April 24, 2019

Certificate Number: AT-1777

Testing performed in support of FCC DoC and Certification approval procedures

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments
Unintentional Radiators (FCC Part 15, Subpart B)	<ul style="list-style-type: none"> ANSI C63.4-2014 		
Industrial, Scientific, and Medical Equipment (FCC Part 18) <ul style="list-style-type: none"> Consumer ISM equipment 	<ul style="list-style-type: none"> FCC MP-5, (February 1986) 		

Electrical

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED
Airborne Equipment	Chassis and Cables	Magnetic Effect	Airbus 2520M1F001200
Airborne Equipment	Power Leads	Power Inputs	Airbus 2520M1F001200
Airborne Equipment	Power Leads	Power Consumption	Airbus 2520M1F001200
Airborne Equipment	Power Leads	Voltage Spikes	Airbus 2520M1F001200
Airborne Equipment	Power Leads	Power Supply Audio Frequency Conducted Susceptibility	Airbus 2520M1F001200



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FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED
Airborne Equipment	Chassis, Power Leads and Interconnecting Cables	Induced Signal Susceptibility	Airbus 2520M1F001001200
Airborne Equipment	Power Leads and Interconnecting Cables	Radio Frequency Susceptibility (Conducted)	Airbus 2520M1F001200
Airborne Equipment	Chassis and Interconnecting Cables	Radio Frequency Susceptibility (Radiated)	Airbus 2520M1F001200
Airborne Equipment	Power Leads and Interconnecting Cables	Emission of Radio Frequency Energy (Conducted)	Airbus 2520M1F001200
Airborne Equipment	Chassis and Interconnecting Cables	Emission of Radio Frequency Energy (Radiated)	Airbus 2520M1F001200
Airborne Equipment	Chassis and Connectors	Electrostatic Discharge (ESD)	Airbus 2520M1F001200
Airborne Equipment	Chassis and Cables	Magnetic Effect	Airbus ABD0100.1.2
Airborne Equipment	Power Leads	Voltage Spikes	Airbus ABD0100.1.2
Airborne Equipment	Power Leads	Power Supply Audio Frequency Conducted Susceptibility	Airbus ABD0100.1.2
Airborne Equipment	Chassis, Power Leads and Interconnecting Cables	Induced Signal Susceptibility	Airbus ABD0100.1.2
Airborne Equipment	Power Leads and Interconnecting Cables	Radio Frequency Susceptibility (Conducted)	Airbus ABD0100.1.2
Airborne Equipment	Chassis and Interconnecting Cables	Radio Frequency Susceptibility (Radiated)	ABD0100.1.2
Airborne Equipment	Power Leads and Interconnecting Cables	Emission of Radio Frequency Energy (Conducted)	Airbus ABD0100.1.2
Airborne Equipment	Chassis and Interconnecting Cables	Emission of Radio Frequency Energy (Radiated)	Airbus ABD0100.1.2
Airborne Equipment	Chassis and Connectors	Electrostatic Discharge (ESD)	Airbus ABD0100.1.2

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Airborne Equipment	Power Leads and Systems	Power Characteristics and Grounding/Bonding	Airbus ABD0100.1.8.1
Airborne Equipment	Chassis and Cables	Section 15 Magnetic Effects	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Power Leads	Section 16 Power Inputs	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Power Leads	Section 17 Voltage Spikes	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Power Leads	Section 18 Audio Frequency Conducted Susceptibility	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Chassis, Power Leads and Interconnecting Cables	Section 19 Induced Signal Susceptibility	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Power Leads and Interconnecting Cables	Section 20 Radio Frequency Susceptibility (Conducted)	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Chassis and Interconnecting Cables	Section 20 Radio Frequency Susceptibility (Radiated)	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Power Leads and Interconnecting Cables	Section 21 Emission of Radio Frequency Energy (Conducted)	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Chassis and Interconnecting Cables	Section 21 Emission of Radio Frequency Energy (Radiated)	RTCA/DO-160C/D/E/F/G
Airborne Equipment	Chassis and Connectors	Section 25 Electrostatic Discharge (ESD)	RTCA/DO-160C/D/E/F/G
Commercial Equipment	Digital Devices	Radiated and Conducted Emissions	ANSI C63.4 (2014) with FCC Method – 47 CFR Part 15, Subpart B: Unintentional Radiators
Commercial Equipment	Industrial, Scientific and Medical Equipment	Radiated, Mains and Telecom Port Conducted Emissions	EN 55011 (2009) +A1 (2010): Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement

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Commercial Equipment	Information Technology Equipment	Radiated, Mains and Telecom Port Conducted Emissions	EN 55022:2010: Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment
Emissions	Multimedia Equipment	Radiated and Conducted Emissions	EN 55032:2012 Electromagnetic compatibility of multimedia equipment - Emission requirements
Commercial Equipment	Generic Residential Products	Radiated, Mains and Telecom Port Conducted Emissions	EN 61000-6-3 (2007) + A1: 2011 Electromagnetic compatibility (EMC) - Part 6-3: Generic Standards Emission Standard for Residential, Commercial and Light Industrial environments
Commercial Equipment	Generic Industrial Products	Radiated, Mains and Telecom Port Conducted Emissions	EN 61000-6-4 (2007) +A1 (2011): Electromagnetic Compatibility (EMC) Part 6-4: Generic Standard - Emission Standard for Industrial Environments
Commercial Equipment	Unlicensed Devices	Radiated and Conducted Emissions	ICES-001 – Issue 4, November 2014 Industrial, Scientific and Medical (ISM) Radio Frequency Generators
Commercial Equipment	Digital Devices	Radiated and Conducted Emissions	ICES-003 Issue 6 (2016) Information Technology Equipment (ITE) — Limits and methods of measurement
Emissions	Lighting Equipment	Insertion Loss, Radiated and Conducted Disturbances	ICES-005 – Issue 3, May 2009 Radio Frequency Lighting Devices
Field and In-Situ Testing Miscellaneous Equipment	Very Large Test Items That Can Not Be In-Lab Tested	Field and In-Situ Testing for Commercial Tests	ANSI C63.4-2014, Clauses 5.6 and 8.3.3, and IEEE 139-1988 Clause 2, IEEE Recommended Practice for the Measurement of Radio Frequency Emission from Industrial, Scientific, and Medical (ISM) Equipment Installed on User's Premises
Field and In-Situ Testing Miscellaneous Equipment	Chambers And Enclosures for Shielding Tests and Very Large Test Items That Can Not Be In-Lab Tested	Field and In-Situ Testing for Military and Aerospace Equipment Items and Tests	Military Standards 461/A/B/C/D/E/F/G Aerospace Standards RTCA/DO-160C/D/E/F/G Shielding Standards IEEE std. 299, MIL-STD-285, MIL-STD-188-125-1 and MIL-STD-188-125-2
Military Equipment	Chassis, Antennas and Cables	Radiated Emissions	MIL-STD-461A/B/C Requirements MIL-STD-462 Procedures Test Methods: RE01, RE02 and RE03
Military Equipment	Power Leads, Interconnecting Cables and Antenna Terminals	Conducted Emissions	MIL-STD-461A/B/C Requirements MIL-STD-462 Procedures Test Methods: CE01, CE02, CE03, CE04, CE06 and CE07

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Military Equipment	Power Leads, Interconnecting Cables and Chassis	Conducted Susceptibility	MIL-STD-461A/B/C Requirements MIL-STD-462 Procedures Test Methods: CS01, CS02, CS06, CS09 and CS11
Military Equipment	Chassis, Antennas and Cables	Radiated Susceptibility	MIL-STD-461A/B/C Requirements MIL-STD-462 Procedures Test Methods: RS01, RS02, RS03 and RS06
Military Equipment	Power Leads, Interconnecting Cables and Antenna Terminals	Conducted Emissions	MIL-STD-461D Requirements MIL-STD-462D Procedures Test Methods: CE101, CE102 and CE106
Military Equipment	Power Leads, Interconnecting Cables and Chassis	Conducted Susceptibility	MIL-STD-461D Requirements MIL-STD-462D Procedures Test Methods: CS101, CS109, CS114, CS115 and CS116
Military Equipment	Chassis, Antennas and Cables	Radiated Emissions	MIL-STD-461D Requirements MIL-STD-462D Procedures Test Methods: RE101, RE102 and RE103
Military Equipment	Chassis, Antennas and Cables	Radiated Susceptibility	MIL-STD-461D Requirements MIL-STD-462D Procedures Test Methods: RS101 and RS103
Military Equipment	Power Leads, Interconnecting Cables and Antenna Terminals	Conducted Emissions	MIL-STD-461E/F/G Procedures and Requirements Test Methods: CE101, CE102 and CE106
Military Equipment	Chassis, Antennas and Cables	Radiated Emissions	MIL-STD-461E/F/G Procedures and Requirements Test Methods: RE101, RE102 and RE103
Military Equipment	Chassis, Antennas and Cables	Radiated Susceptibility	MIL-STD-461E/F/G Procedures and Requirements Test Methods: RS101 and RS103
Military Equipment	Power Leads, Interconnecting Cables and Chassis	Conducted Susceptibility	MIL-STD-461E/F/G Procedures and Requirements Test Methods: CS101, CS106, CS109, CS114, CS115 and CS116
Miscellaneous Equipment	Chassis	Ground Plane Interference	EMSD-ITP-89-02 (October 1988): Ground Plane Interference Testing
Miscellaneous Equipment	Enclosures	Shielding Effectiveness	IEEE Std. 299 (1969): Recommended Practice for Measurement of Shielding Effectiveness of High-Performance Shielding Enclosures
Miscellaneous Equipment	Enclosures	Shielding Effectiveness	IEEE Std. 299 (1996): Recommended Practice for Measurement of Shielding Effectiveness of High-Performance Shielding Enclosures

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Miscellaneous Equipment	Enclosures	Shielding Effectiveness	IEEE Std. 299 (1997): Measuring the Effectiveness of Electromagnetic Shielding Enclosures – Description
Miscellaneous Equipment	Enclosures	Shielding Effectiveness	IEEE Std. 299 (2006): Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosures
Miscellaneous Equipment	Enclosures	Shielding Effectiveness	MIL-STD-188-125-1 (17 July 1998): High-Altitude Electromagnetic Pulse (HEMP) Protection For Ground-Based C4I Facilities Performing Critical, Time-Urgent Missions Part 1 – Fixed Facilities
Miscellaneous Equipment	Enclosures	Shielding Effectiveness	MIL-STD-188-125-2 (3 March 1999): High-Altitude Electromagnetic Pulse (HEMP) Protection For Ground-Based C4I Facilities Performing Critical, Time-Urgent Missions Part 2 – Transportable Systems
Miscellaneous Equipment	Enclosures	Shielding Effectiveness	MIL-STD-285 (June 25, 1956): Attenuation Measurements for Enclosures, Electromagnetic Shielding, for Electronic Test Purposes, Method Of
Miscellaneous Equipment	Power Leads	Power Characteristics	MIL-STD-1275A/B/C/D/E: Characteristics of 28 Volt DC Electrical Systems in Military Vehicles
Miscellaneous Equipment	Power Leads	Power Characteristics	MIL-STD-704A/B/C/D/E/F: Aircraft Electrical Power Characteristics
Miscellaneous Equipment	Vehicle Components	Conducted Immunity	SAE J1113-2 (1996-09): Electromagnetic Compatibility Measurement Procedures and Limits for Vehicle Components (Except Aircraft) – Conducted Immunity, 30 Hz to 250 kHz – All Leads
Nuclear Safety Related Equipment	Chassis and Interconnecting Cables	Radiated Susceptibility	Regulatory Guide 1.180, Revision 1: Test Methods: MIL-STD-461E RS101, RS103 (Low Frequency) and RS103 (High Frequency)
Nuclear Safety Related Equipment	Power Leads	Conducted Emissions	USNRC Regulatory Guide 1.180, Revision 1: Test Methods: MIL-STD-461E based CE101 (Low Frequency) and CE102 (High Frequency)
Nuclear Safety Related Equipment	Power Leads	Conducted Susceptibility	USNRC Regulatory Guide 1.180, Revision 1: Test Methods: MIL-STD-461E CS101 (Low Frequency) and CS114 (High Frequency)
Nuclear Safety Related Equipment	Signal Leads	Conducted Susceptibility	USNRC Regulatory Guide 1.180, Revision 1: Test Methods: MIL-STD-461E CS114 (High Frequency), CS115 and CS116

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Nuclear Safety Related Equipment	Chassis and Interconnecting Cables	Radiated Emissions	USNRC Regulatory Guide 1.180, Revision 1: Test Methods: MIL-STD-461E RE101, RE102 (Low Frequency) and RE102 (High Frequency)

Notes:

1. * = As Applicable
2. For standards or methods listed on the scope of accreditation without a revision number or issue date or with a superseded issue date or revision number, laboratories are expected to be competent in the use of the current version within one year of standard or method publication update (or by the authorized use date of a recognition body or regulatory agency). When an older standard or method is required for an accredited test, or a regulatory agency (e.g. US Nuclear Regulatory Agency Regulatory Guide 1.181, revision 1) recognition, the scope covers the older version of the listed tests and the general controls enveloped in ISO/IEC 17025 Accreditation.
3. For the CISPR standards, the test laboratory is using the regional test requirement documents as opposed to the base reference documents as defined by the regional regulatory agencies (e.g. AS/NZ representing Australia and New Zealand, EN for the European community).
4. FCC fully recognized accredited laboratory listed on the FCC OET website that incorporates FCC KDB Publication 853844 D01 Accredited Lab Checklist v02, FCC KDB Publication 974614 Accredited Test Lab Roles and Resp v03 and FCC KDB Publication 704992 Site Validation Requirements above 1 GHz dated 06/12/2015.
5. This scope is formatted as part of a single document including the Certificate of Accreditation No. AT-1777



 Vice President

