

# Testing Solutions

## Vitesse Performance & Validation Capabilities

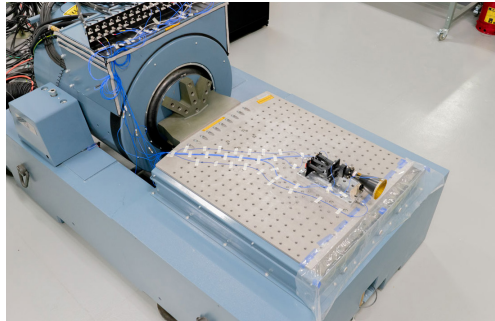
### At-A-Glance Capabilities

With over 60 years of space heritage, Vitesse Systems is a trusted partner in delivering high-performance solutions for mission-critical applications. Our in-house testing capabilities—spanning thermal management, RF performance, and environmental stress—ensure every component meets the highest standards. From design through qualification, we rigorously validate performance to support the success of today's most advanced aerospace and defense programs.



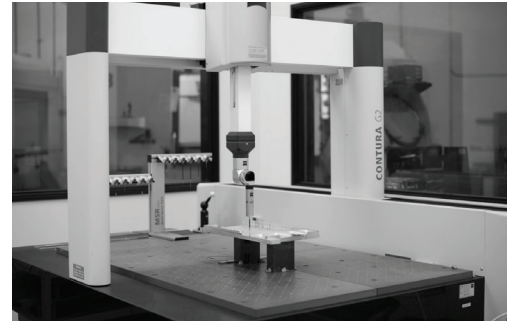
#### RF Testing Solutions

Full suite of RF testing capabilities, enabling in-house performance verification.



#### Environmental Testing

Verified performance under mechanical stress for mission-critical reliability.




#### Inspection & NDT


Real-time and non-destructive testing confirms process quality and standards compliance.


### Enabling Possible.

Vitesse Systems has a strong legacy of delivering true end-to-end solutions—combining advanced design and engineering expertise with a broad range of complementary manufacturing and testing capabilities. Our focus on tight-tolerance thermal management, precision antenna components, and complex power assemblies drives the advancement of mission-critical electronics and military communications.

# Test Specifications Overview

 Radio Frequency (RF) Testing				
Test Type	Frequency Range	Chamber Size / Range	Key Capabilities	Temp. Range
PIM Testing	L, S, C, X, Ku, Ka bands	14' x 14' x 14' chamber	<ul style="list-style-type: none"> <li>200W per carrier</li> <li>Noise floor: -150 dBm (3rd order PIM)</li> </ul>	-130°C to +120°C
Near Field Range	1 to 110 GHz	8' x 8' scan area	<ul style="list-style-type: none"> <li>Planarity: 0.001"</li> <li>Accurate planar scans</li> <li>High-resolution pattern measurements</li> <li>Spherical near-field range tests available</li> </ul>	N/A
Far Field Range	1 to 40 GHz	30' x 14' x 14' chamber	<ul style="list-style-type: none"> <li>Linear &amp; circular polarization</li> <li>Low cross polarization</li> <li>Low axial ratio</li> </ul>	N/A
RF Bench Testing	1 to 110 GHz (up to 220 GHz)	N/A	<ul style="list-style-type: none"> <li>Multiple performance network analyzers</li> <li>Full S-parameter characterization</li> <li>Mini far-field axial ratio test range</li> <li>Thermally controlled cleanroom environment</li> <li>Filters / Diplexers</li> </ul>	N/A

 Environmental Testing		
Test Type	Description	Key Capabilities
Vibration Testing	Full space qualification using Unholtz-Dickie T-2000 series shaker system.	<ul style="list-style-type: none"> <li>Supports vertical and horizontal axis testing</li> <li>Up to 20,000 lbf force</li> <li>40-channel Data Acquisition (DAQ) system</li> <li>Over 350 completed analyses</li> </ul>
Pressure Drop Testing	Qualification and acceptance liquid flow testing for liquid-cooled solutions.	<ul style="list-style-type: none"> <li>Capable of flowing nearly any fluid</li> <li>Prepared to test and qualify various liquid-cooled systems</li> </ul>
Temperature RF Testing	RF testing in nitrogen atmosphere chambers across a broad temperature range.	<ul style="list-style-type: none"> <li>Temperature range: -160°C to +200°C</li> <li>Commonly evaluates RF performance at temperature extremes</li> </ul>
Thermal Vacuum Testing	Testing units in low-pressure environments using LACO Thermal Vacuum Chamber (TVAC).	<ul style="list-style-type: none"> <li>Noise floor: -160 dBm</li> <li>Temperature range: -160°C to +250°C</li> <li>Equipped with high-power amplifiers over Ka-, X/Ku-, S/C-, and K-Bands</li> <li>Other bands accommodated upon request</li> </ul>

 Inspection & NDT		
Test Type	Capacity	Description
CMM Inspection with SPC	CM1: 1.5mx1.2mx1.0m CM2: .8x.7x.6m	Utilizes Coordinate Measuring Machines (CMM) combined with Statistical Process Control (SPC) to ensure dimensional accuracy and consistency throughout the manufacturing process.
Helium Leak Testing	N/A	Employs helium as a tracer gas to detect leaks in sealed components, ensuring the integrity of assemblies under vacuum or pressure conditions.
Pressure Testing (Burst/Proof)	N/A	Conducts burst and proof pressure tests to verify that components can withstand specified pressure levels without failure, ensuring safety and reliability in operation.