

Testing and Validation

Formal test reports and validation evidence for OpenVVVF hardware, firmware, and integration.

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Applies to	openvvvf-control-module, chassis-size-2, chassis-size-3
Product line	openvvvf

1. Testing and Validation

This section contains formal test records and validation evidence. Each document is evidence that a specific feature, requirement, or hazard mitigation was exercised.

1.1. Test evidence dashboard

1.1.1. Hardware

Test ID	Name	Motor class	Status	Trace	Report
1	PMSM Resistance Calibration Validation	PMSM	draft	motor self-commissioning / calibration routine	Report
2	PMSM Inductance Calibration Validation	PMSM	draft	motor self-commissioning / calibration routine	Report
3	Power Resistor Sanity Check	-	draft	motor self-commissioning / calibration routine	Report
4	Induction Motor Testbed	Induction	draft	motor self-commissioning / calibration routine	Report
5	Induction Motor Resistance Calibration Validation	Induction	draft	motor self-commissioning / calibration routine	Report
6	Inductance Calibration Validation	Induction	draft	motor self-commissioning / calibration routine	Report

These reports validate the calibration routines on the C2 test fixture. The same routines are used on all OpenVVVF chassis; add a new report only when a different motor or harness is introduced.

1.2. Domains

- **Hardware** - Electrical, thermal, mechanical, and environmental tests.
- **Firmware** - Unit tests, integration tests, fault-injection tests, and safety-mechanism tests.
- **Integration** - System-level tests combining control module and power stage.