

FLT 150A

FAST LOAD TRANSIENT

E-LOAD PLATFORM FOR NEXT-GEN PMIC VALIDATION



PRODUCT

Application Areas: R&D
Post-Silicon Validation
VRMs, multiphase controllers, PMICs, etc.



The **FLT 150A** is a dedicated test instrument designed to generate high-current, high-slew-rate load transients with deterministic and repeatable behavior. Positioned between conventional electronic loads and fully custom validation setups, FLT 150A addresses the growing need for precise, time-critical load emulation in modern power validation laboratories.

FLT 150A delivers programmable dynamic current profiles with slew rates up to 150A/μs, enabling accurate reproduction of fast load steps, pulse trains, and complex transient sequences. Its FPGA-based control architecture ensures nanosecond-level timing determinism, allowing engineers to correlate load events precisely with voltage response and measurement instrumentation.

Seamless integration with test systems and modern software environments enables automated testing, synchronization with measurement equipment, and straightforward inclusion in existing validation workflows.

As a standalone or system-integrated instrument, FLT 150A provides a future-ready platform for fast transient load generation, giving validation teams a reliable and repeatable tool to stress, measure, and characterize dynamic power behavior with confidence.

HARDWARE FEATURES

- High-bandwidth current control with real-world transient emulation up to 150A/μs and 200 ns pulse timing resolution
- Accurate, time-aligned measurements using a 20 MHz Rogowski coil, precision Hall sensor, and 50 MS/s voltage and current acquisition
- Flexible synchronization and triggering with external load start and trigger outputs to align other instruments to the exact transient event
- High-density Samtec SOLC connector providing a low-inductance interface to the DUT board
- Safe, reliable operation through built-in protections and a high-power design with controlled thermal behavior and robust planar magnetics

SOFTWARE FEATURES

- LabVIEW and Python APIs for fast setup, test automation, and easy integration into existing test environments
- Integration into NI InstrumentStudio with an NI Measurement Plug In, delivering out of the box fast transient load tests for immediate hands on use
- Programmable transient waveform control for realistic load emulation
- Synchronized control and measurement for precise time-aligned analysis

NOFFZ VALUE

- Reliable transient testing for next gen PMICs
- Project specific customization available on request
- Engineering support to accelerate FLT 150A integration in your validation workflow
- Providing consulting services with our experienced post-silicon validation engineering team



TECHNICAL DATA

Performance

Continuous Current	150A
Voltage Range	0.3V-5.5V
Continuous Power	< 500 W
Max Slew Rate	150A/μs
Min Pulse On-Time	400 ns
Pulse Duration Resolution	200 ns

Measurements

Voltage	50 MS/s, 8-bit, adjustable range
Current	Hall (1 MHz) + Rogowski (20 MHz), 13-bit, 50 MS/s
Protection	Over-current
Synchronization	Export/Import digital trigger

System Architecture

Motherboard	150x150x25 mm (W x H x D)
Coupon Cards	70x10x40 mm (W x H x D)
Complete System	250x250x100 mm (W x H x D)
Communication	Ethernet
Power Supply	12VDC
Integration	NI PXI provides DUT power, interfaces, synchronization, and additional monitoring I/Os

