

Product Brief

High Performance 300 W PXI Electronic Load Module

Provides electronic load capabilities of sinking DC power with high-accuracy measurements in a compact form factor optimized for design validation, characterization, and production test.

Ideal for:

- General semiconductor electronics test
- Power electronics validation and test
 - Power management ICs (PMICs)
 - DC-DC converters
 - Linear regulators
 - Gate drivers/isolators
 - Buck and boost converters
 - And more



The NI Advantage

01

High Accuracy: Get detailed insights thanks to the high accuracy of output values and simultaneous current and voltage measurements, while eliminating the need for additional equipment such as DMMs.

02

High Speed: Perform fast e-load operations with the high data bandwidth and low latency of PXI. High-speed data converters also provide measurement sample rates up to 1.8 MS/s and update rates up to 100 kS/s for maximum flexibility.

03

Timing & Synchronization: Use built-in capabilities of the PXI architecture to trigger and synchronize multiple instruments, and skip the hassle of manually routing and configuring cables.

PXI Electronic Load Module

PXIe-4051

	PXIe-4051
Quadrant of Operation	IV - Sinking (II if manually inverted)
Number of PXI Slots	3
Channel Count	1
Max Voltage (V)	60
Max Current (A)	40
Max Power (W)	300
Measurement Sample Rate (MS/s)	1.8
Update Rate (kS/s)	100
Isolation Voltage (V)	150 CAT I
Connector Type	Weidmuller Omnimate Power SV/BVF Connector
Driver Software	NI-DCPower
Chassis Requirement	58 W or 82 W NI Chassis

Table 1: Features

Highlighted Features

- Simultaneous current & voltage measurements
- User-programmable slew rate up to 3 A/ μ s
- Full current operation starting at 500 mV
- DMM-like measurement accuracy
- Custom transient response tuning (SourceAdapt feature)
- Selectable measurement ranges for both current and voltage to maximize the accuracy of large and small signals
- Advanced Sequencing (per-step properties)

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