

Diamond_x FPVI_x

High-Voltage, High-Current Floating Programmable Power Supply



The Floating Power Voltage/Current Source (FPVI_x) is a high voltage, high current floating programmable power supply for the Diamond_x test system targeted for use in power management, automotive, and display driver applications.

Highlights

- Fast throughput with high power pulsed mode operation
- Transient detect capability to capture perturbations at the device in program development, or production test
- Reduced load board complexity using the SmartMux for high voltage and current signal routing
- Expert mode to maximize energy efficiency of the instrument

Features

- 8 channels, 4 floating
- SmartMux capabilities
- Transient detection
- Duty-Cycle Credit System
- Four quadrant force voltage or force current operation
- Continuous and pulsed mode operation
- Kelvin force and measurement capability
- Ganging and stacking capabilities
- Floating operation to 250 V from ground
- Independent measure ADC per pin
- Sequencer control with local per-channel results buffer



Automotive



Consumer



Power Management



IoT/loV & Optoelectronics



Industrial & Medical



MCU



Mobility

- 8 Digital Channels per instrument
- Force/measure 4-quad ± 60 V / 5 A per channel
- 4:1 SmartMux
- Transient detection enables monitoring for unexpected voltages or currents at DUT

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The Floating Power Voltage/Current Source (FPVI_x) is a high voltage, high current floating programmable power supply for the Diamond_x test system. FPVI_x is targeted for use in power management, automotive and display driver applications. The FPVI_x supports the following features:

- An eight-channel board providing fully independent floating operation with four channels and an eight-channel mode that uses the FPVI_x Shared Rail Architecture
- SmartMux capabilities that enable.
 - Fanning each channel out to four different DUT IO path
 - Mapping two alternate load board connected signals to the DUT connection path
- Transient detection that enables monitoring for unexpected voltages or currents at the device under test.
- A rack power supply with two Power Modes: automatic mode and an “expert” mode for greater control.
- The FPVI_x Duty Cycle Credit System which provides thermal shut down circuitry to enable faster throughput for pulse mode testing.
- Four quadrant force voltage (FV) or force current (FI) operation.
- Continuous and pulsed mode operation.
- 4K Measure FIFO per channel, simplifying multisite measurements.

Key Specifications

Feature	± Ranges	Resolution	Maximum Force / Measure Value
Force Voltage	60 V, 25 V, 10 V, 5 V, 2.5 V	16 bits	250 V w.r.t. Ground, stacked 60 V per channel
Measure Voltage	60 V, 25 V, 10 V, 5 V, 2.5 V, 1 V	16 bits	250 V w.r.t. Ground, stacked 60 V per channel
Force Current	5 A, 500 mA, 50 mA, 5 mA, 500 μA, 50 μA, 5 μA	16 bits	5 A @ 20% Duty cycle 2.5 A continuous per channel 20 A Ganged
Measure Current	5 A, 500 mA, 50 mA, 5 mA, 500 μA, 50 μA, 5 μA	16 bits	5 A max Single channel 20 A max Ganging

All specifications are subject to change without notification and are for reference only. For detailed performance specifications, please contact Cohu.