A7590D

1 Ch. 80 V/50 mA Floating Digital Controlled SiPM Power Supply - PCB Mount

Features

- 2-75 V Output Voltage
- Programmable output ramp starting from 1.2V to output voltage
- 50 mA maximum output current
- 1 mV Output Step Voltage
- Low noise, 560 µVrms at 50mA
- Isolated output. It can be used to provide both positive and negative power supply
- I2C, UART, USB and Analog Voltage control
- HV SiPM temperature compensation with remote temperature sensing
- 100 µV resolution voltage monitor
- 100 nA resolution current monitor
- 0.05°C resolution temperature monitor
- Programmable over-current protection
- Open source libraries in C/C++ and Python compatible with Arduino and Raspberry PI
- Working on Windows and Linux
- Zeus User interface to control multiple devices both via I2C, UART or USB
- THT and SMT compatible footprint

Description

The **A7590D** is an isolated high voltage regulator specifically designed for SiPM bias. It has a built in temperature compensation controller with programmable coefficient.

The module can be digitally controlled by **UART** and **I2C.** Output voltage could be also controlled proportionally to an analog input, providing a voltage on a pin. A7590D can provide up to **50 mA** and the output voltage could be regulated between **20 V** and **80 V** with a resolution of **1 mV**. It is possible to set a programmable ramp starting from 1.2 V to the setpoint with configurable slope. The module is equipped with **24 bit ADC** to monitor output voltage and output current. A **PID** controller can be enabled to exploit the high resolution of the ADC to stabilize the output.

The module output is **electrically isolated** from the power supply and control interface. The module indeed can be used as floating power supply, or, grounding the negative or positive output, as a non-isolated positive or negative power supply.

Technical Specifications

Output Bias Voltage (Vset)

0 ÷ +2000 V DC

Vset Resolution

1 V

Vmon Resolution

1 V

Ramp-Up/Ramp-Down

1 ÷ 500 V/s in steps of 1V

Maximum Output Bias Current (Iset)

1 mA

Ordering Options

Code	Description	
WA7590DUXAAA	A7590DU - USB Controlled Power Supply for SiPM 60V 70mA	RoHS
WA7590DXAAAA	A7590D - Digital Controlled Power Supply for SiPM 60V 70mA	RoHS

Related Products

DT5490

Desktop +85 V/10 mA Digital Controlled SiPM Power Supply with USB

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