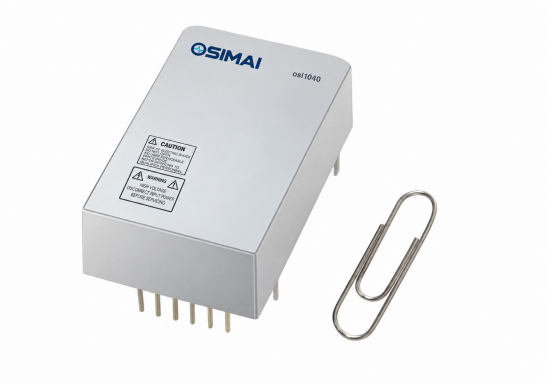
osi1600 Series

100 V–2 kV, 0.5–2 W



Product introduction

The osi1600 series is a miniature high voltage power module with an output voltage range of 100 V to 2 kV and output power from 0.5 to 2 W. It features a compact design, 10 ppm ultra-low noise, 10 ppm/hour stability, a 10 ppm/°C temperature coefficient and six-sided shielding. All models provide external potentiometer or reference-voltage programming, monitoring, and arc, short-circuit and overload protection.

Product features

- 10 ppm/hour stability
- 10 ppm ultra-low noise
- 10 ppm/°C temperature coefficient
- Six-sided shielding
- External potentiometer or voltage programming
- Customization available to user requirements

Specifications

Parameter	Specification
Input	+24 VDC ±2%; input current 350 mA.
Output	Selectable output ratings: 0.1, 0.2, 0.5, 1, 1.5 and 2 kV.
Stability	Less than 0.001% per hour after a 0.5-hour warm-up.
Temperature coefficient	Voltage and current: better than 10 ppm/°C.
Ripple	Better than 10 ppm peak-to-peak at rated output.
Voltage control	External 20 kΩ potentiometer or external control voltage (Vp-in) from 0 to +5 VDC; Zin = 100 kΩ.
Voltage monitor	0 to +5 VDC represents 0–100% rated output; Zout = 20 kΩ; accuracy ±1%.
Voltage line regulation	±0.001% for ±2% input voltage change.
Voltage load regulation	±0.01%, no load to rated load.
Ambient temperature	Operating: 0 to +50°C. Storage: −40 to +85°C.
Operating humidity	0–90% relative humidity, non-condensing.
Cooling	Natural convection.
Dimensions	12.3 mm wide × 25.4 mm high × 40.64 mm deep.
Weight	Approximately 25 g.

Model selection (customizable)

Output (kV)	Output (mA)	Positive polarity	Negative polarity
0.1	5	osi1600P0.1-0.5	osi1600N0.1-0.5
0.1	10	osi1600P0.1-1	osi1600N0.1-1
0.1	20	osi1600P0.1-2	osi1600N0.1-2
0.2	2.5	osi1600P0.2-0.5	osi1600N0.2-0.5
0.2	5	osi1600P0.2-1	osi1600N0.2-1
0.2	10	osi1600P0.2-2	osi1600N0.2-2
0.5	1	osi1600P0.5-0.5	osi1600N0.5-0.5
0.5	2	osi1600P0.5-1	osi1600N0.5-1
0.5	4	osi1600P0.5-2	osi1600N0.5-2
1	0.5	osi1600P1-0.5	osi1600N1-0.5
1	1	osi1600P1-1	osi1600N1-1
1	2	osi1600P1-2	osi1600N1-2
1.5	0.33	osi1600P1.5-0.5	osi1600N1.5-0.5
1.5	0.67	osi1600P1.5-1	osi1600N1.5-1
1.5	1.33	osi1600P1.5-2	osi1600N1.5-2
2	0.25	osi1600P2-0.5	osi1600N2-0.5
2	0.5	osi1600P2-1	osi1600N2-1
2	1	osi1600P2-2	osi1600N2-2

Power supply pin definitions

Pin	Signal
1	Power input: +12 VDC ±2%; optional +24 VDC ±2%, +15 VDC ±2% or +5 VDC ±2%.
2	Power ground
3	Voltage programming: 0 to +5 VDC = 0–100% rated output; Zin = 100 kΩ.
4	+5 VDC reference output
5	Active-low enable: ON = GND; OFF = OPEN.
6	Voltage monitor: 0 to +5 VDC = 0–100% rated output; Zout = 20 kΩ.
7	High voltage output
8	High voltage ground

Typical applications

Mass spectrometry; photomultiplier tubes; microchannel plates; proportional counters; Geiger tubes; avalanche photodiodes; solid-state detectors; ionization chambers; gas chromatography; electron-multiplication detectors; nuclear instrumentation; electrophoresis; DNA sequencing; radiation counters; electron beams; ion beams; high-voltage bias; dielectric withstand testing; precision lens image intensifiers; semiconductor testing; electrostatic discharge (ESD) testing; pulsed power supplies; capacitor discharge; life sciences; medical and chemical applications; scientific experiments; industrial applications.

Outline dimensions

All dimensions in mm.

