RPDG-50 & RPDG-100

PULSED DC GENERATORS
5kW AND 10kW HIGH FREQUENCY ASYMMETRIC BIPOLAR PULSED DC POWER

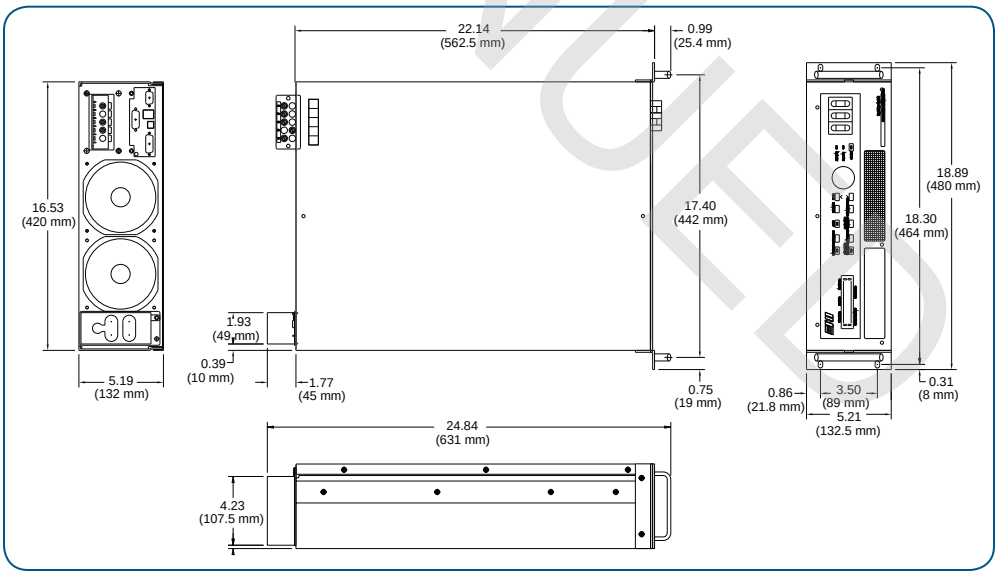
Description

The RPDG-50 and RPDG-100 are 5,000W and 10,000W Asymmetric Bipolar Pulsed DC generators which enable the deposition of a wide variety of low defect films including Al_2O_3, BST, PZT, Ta_2O_5, TaN, TiN, ITO, SiO_2, ZnO and SiN.

Features & Benefits

- For Reactive* PVD, CVD Bias and Hard Coating
- Programmable Frequency, Duty Cycle

** This power supply may not be used in the United States to supply direct current power to the plasma in a reactive sputtering system used for depositing electrically insulating materials on a substrate, and where the direct current power is periodically reversed to clear or neutralize charge build-up for the purpose of arc prevention as claimed in U.S. Patent Nos. 5,718,813 and 6,001,224.*



Dimensional Drawing —

Note: Unless otherwise specified, dimensions are nominal values in inches (mm referenced).

Power Solutions

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Specifications

Frequency	Programmable from 25 to 125 kHz or 50 to 250 kHz (Range set by factory)	
Duty Cycle	Programmable from 0 to 40% (Reverse Bias)	
Power Output	5kW and 10kW	
Power and Current Limits		
Power	5.25kW and 10.5kW for rated 5kW and 10kW output respectively; proportional at other power levels	
Current	10.5A and 21A	
Regulation Modes	Volts, Amps, Watts	
Output Control Modes	Ramping, Run Time, Joule, Sequence, Constant Run	
DC Linearity/Accuracy		
Independent of Regulation Mode	±0.1%: 10-100% of rated output	
In Watts Mode	±0.25%: 1-10% of rated output	
Line Regulation	±0.1% for ±10% line voltage change ±2% line frequency change	
Load Regulation	±0.1% for a 4:1 load impedance range	
Line Voltage and Current	**5kW**	**10kW**
AC Input (3-phase)/Nom/Max	200-208V (-7.5%+10%)/19A/25A 400V (±10%)/11A/14A 480V (±10%)/9A/11A	200-208V (-7.5%+10%) / 35A / 45A 400V (±10%) / 19A / 25A 480V (±10%) / 16A / 21A
Line Frequency	50 and 60 Hz, ±2%	
Line-to-Output Efficiency	>85%	
Input Power Factor	>0.7 at maximum power output	
Front Panels		
Fully Functional	Provides complete control and monitoring from the master unit	
Remote	Provides complete remote control and monitoring functions	
Blank	Three LED's indicate AC On, DC On, and Fault	
Cooling System	Forced air; front panel and right side in, rear panel out	
Weight	55 lbs (25kg)	
Dimensions (H x W x D)	5.22" x 18.9" x 24.8" (132.5 x 480 x 631 mm) including rack mount and handles	
Environmental Conditions		
Operating Temperature	5 to 40°C	
Relative Humidity (operational)	80% RH maximum at up to 31°C (decreasing linearly to 50% RH maximum at 40°C)	
Max. Operating Altitude	+3500 meters above sea level	
Standard Connectors		
Digital and Analog Interface	9-pin Type D with RS232/422 ENI Protocol, 25-pin Analog	
Optional Interface	PROFIBUS®, DeviceNet™	
Output	UHF female or Terminal Block	
AC Input	5 terminal barrier strip	
Interlock	2 terminal PC header	
Rack Mounting	EIA (Standard) Universal JIS Bracket (optional)	
Compliance	CE, CAN/CSA-C22.2 No. 61010.1, UL 61010-1 IEC 68-2-9 test for bump, IEC 68-2-6 test for vibration, IEC 68-2-23 test for bump	

MKS Instruments, Inc.
Global Headquarters

2 Tech Drive, Suite 201
Andover, MA 01810

Tel: 978.645.5500
Tel: 800.227.8766 (in USA)
Web: www.mksinst.com

MKS Instruments, Inc.
Power Solutions

100 Highpower Road
Rochester, NY 14623

Tel: 585.427.8300

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