



RPDG-50 & RPDG-100

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

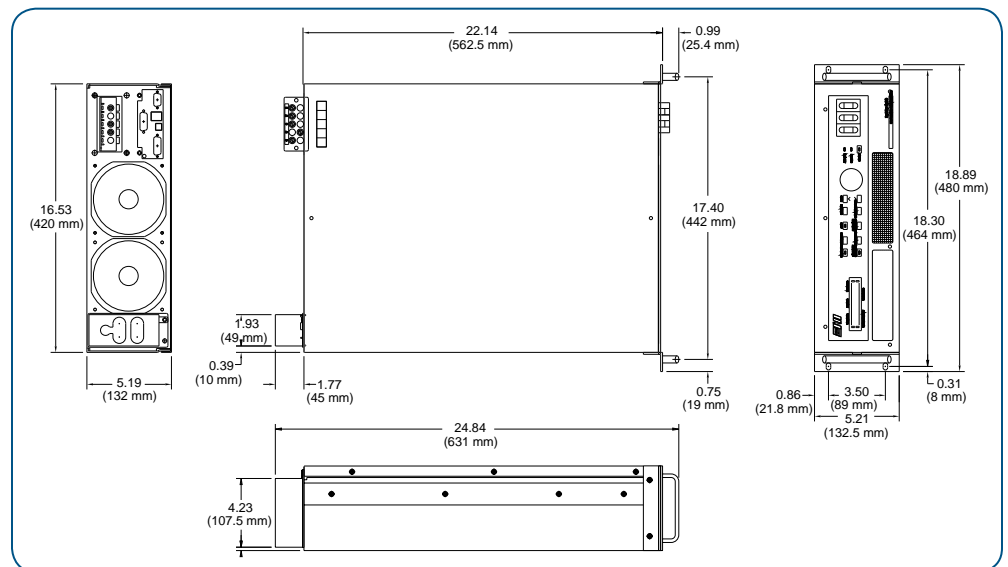
Description

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).



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 & 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 & Current									
AC Input (3-phase)/Nom/Max	<table><tr><td>5kW</td><td>10kW</td></tr><tr><td>200-208V (-7.5%+10%)/19A/25A</td><td>200 -208V (-7.5%+10%) / 35A / 45A</td></tr><tr><td>400V (±10%)/11A/14A</td><td>400V (±10%) / 19A / 25A</td></tr><tr><td>480V (±10%)/9A/11A</td><td>480V (±10%) / 16A / 21A</td></tr></table>	5kW	10kW	200-208V (-7.5%+10%)/19A/25A	200 -208V (-7.5%+10%) / 35A / 45A	400V (±10%)/11A/14A	400V (±10%) / 19A / 25A	480V (±10%)/9A/11A	480V (±10%) / 16A / 21A
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400V (±10%)/11A/14A	400V (±10%) / 19A / 25A								
480V (±10%)/9A/11A	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 & 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 & handles								
Safety Compliance	NRTL: UL 3111-1 (1994) CAN/CSA C22.2 No. 1010.1-92 EN61010-1:1993/A2:1995								
EMC Compliance	EN50081-2: 1992 EN50082-2: 1995								
Shock Resistance (certified to meet)	IEC 68-2-9 test for bump IEC 68-2-6 test for vibration IEC 68-2-23 test for bump								
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 & Analog Interface	9-pin Type D with RS232 / 422 ENI Protocol, 25 pin Analog								
Optional Interface	PROFIBUS®, DNET™								
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)								



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