



## RPDG-200

### PULSED DC GENERATORS 20kW HIGH FREQUENCY ASYMMETRIC BIPOLAR PULSED DC POWER

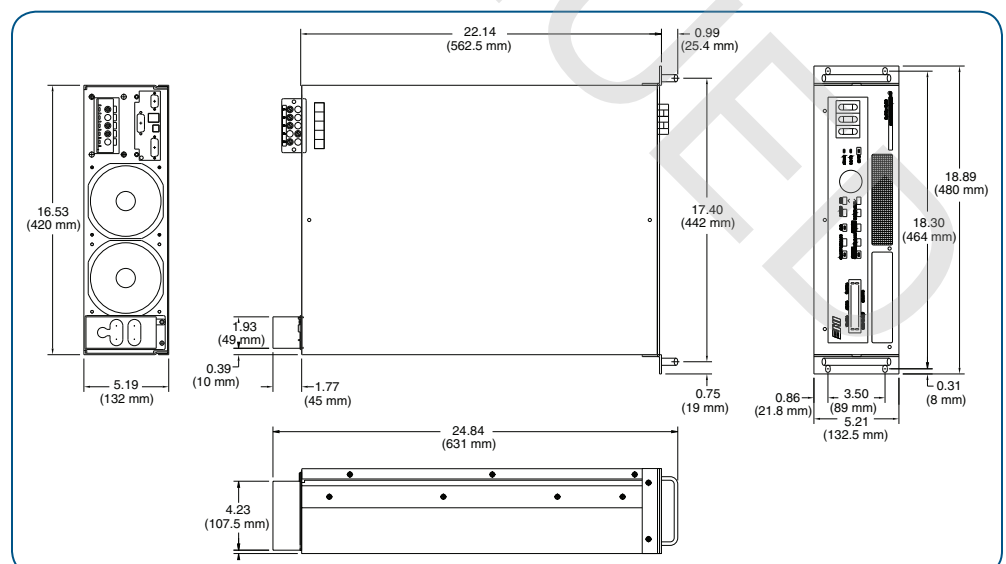
#### Description

The RPDG-200 is a 20,000W Asymmetric Bipolar Pulsed DC system which enables the deposition of a wide variety of low defect insulating films including  $Al_2O_3$ , BST, PZT,  $Ta_2O_5$ , TaN, TiN, ITO,  $SiO_2$ , ZnO and SiN. The RPG-200 system is comprised of a pulse master unit driving a 20kW DC slave providing up to 20kW in a single output.

#### Features & Benefits

- For Reactive\* PVD, CVD Bias and Hard Coating
- Programmable Frequency, Duty Cycle
- Independent Bias Power Supply for Superior Management of Reverse Excursion

*\* 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

<b>Frequency</b>	Programmable from 25 to 125 kHz or 50 to 250 kHz (Range set by factory)		
<b>Duty Cycle</b>	Programmable from 0 to 40% (Reverse Bias)		
<b>Power Output</b>	20kW		
<b>Power and Current Limits</b>			
Power	21kW for rated 20kW output; proportional at other power levels		
Current	42A		
<b>Regulation Modes</b>	Volts, Amps, Watts		
<b>Output Control Modes</b>	Ramping, Run Time, Joule, Sequence, Constant Run		
<b>DC Linearity/Accuracy</b>			
Independent of Regulation Mode	±0.1%: 10-100% of rated output		
In Watts Mode	±0.25%: 1-10% of rated output		
<b>Line Regulation</b>	±0.1% for ±10% line voltage change ±2% line frequency change		
<b>Load Regulation</b>	±0.1% for a 4:1 load impedance range		
<b>Line Voltage and Current</b>			
AC Input (3-phase) Max	200-208V (-7.5%+10%)	<b>Pulse</b>	<b>Slave</b>
400V	(±10%)	12A	85A
480V	(±10%)	6A	45A
		5A	40A
<b>Line Frequency</b>	50 and 60 Hz, ±2%		
<b>Line-to-Output Efficiency</b>	>85%		
<b>Input Power Factor</b>	>0.7 at maximum power output		
<b>Front Panels</b>			
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		
<b>Cooling System</b>	Forced air; front panel and right side in, rear panel out		
<b>Weight</b>	55 lbs (25kg) per 3U unit		
<b>Dimensions (H x W x D)</b>	5.22" x 18.9" x 24.8" (132.5 x 480 x 631 mm) including rack mount and handles		
<b>Environmental Conditions</b>			
Operating Temperature	5 to 40°C		
Relative Humidity	<95% non-condensing		
Max. Operating Altitude	+3500 meters above sea level		
<b>Standard Connectors</b>			
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		
<b>Rack Mounting</b>	EIA (Standard)		
	Universal JIS Bracket (optional)		
<b>Compliance</b>	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		



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