



*GHW Series 13.56 MHz
1250, 2500 and 5000 Watts
High Reliability
RF Plasma Generator*

GHW Series

RF PLASMA GENERATORS

The GHW Series RF power generators deliver maximum rated output powers of 1250, 2500 and 5000 Watts at a frequency of 13.56 MHz. The GHW generators offer field-proven reliability, exceptional stability, and unsurpassed repeatability for high uptime and process yield.

The GHW RF plasma generators are ideally suited for Plasma Enhanced Chemical Vapor Deposition (PECVD), High Density Plasma CVD (HDPCVD), etching and other thin film applications during the manufacture of integrated circuits, flat panel displays, and data storage devices.

Features & Benefits

Superior RF Stability

- Frequency stability equals 13.56 MHz $\pm 0.005\%$
- Regulation tolerance of $\pm 1.5\%$ of set point within power range

Excellent Reliability

- Microprocessor-based
- Automatic load mismatch protection
- Unlimited load impedance range

Mismatched Power Output

Worst phase forward power referenced to rating

VSWR	GHW-12	GHW-25	GHW-50
1.1:1	1250 W	2500 W	5000 W
2.0:1	1000 W	2000 W	3250 W
3.0:1	650 W	1500 W	2000 W



Specifications and Ordering Information

Model	GHW-12	GHW-25	GHW-50
Rated Power Output (into 50 ohm load)	1250 W	2500 W	5000 W
Frequency/Stability	13.56MHz \pm 0.005%		
Dynamic Power Range	10 - 1250W	10 - 2500W	10 - 5000 W
Load Impedance Range	Unlimited		
RF Stability/Spurious Output	Unconditionally stable for any load within operational limits < -45dBc		
Harmonic Output & Distortion	< -40dBc		
Load Mismatch Protection	Automatic; forward power limits typically 0.25ms after reverse power reaches a pre-programmed level \leq 16% of rated power.	Automatic; forward power limits typically 0.25ms after reverse power reaches a pre-programmed level \leq 20% of rated power.	
Regulation Tolerance	> 125 W: \pm 1.5% SP < 125 W: \pm 3.0 W	> 250 W: \pm 1.5% SP < 250 W: \pm 6.0 W	> 500 W: \pm 1.5% SP < 500 W: \pm 10.0 W
Primary AC Power Source	200/208 VAC, 3/PE- (3W+G) 14 A/PHASE 380/400 VAC, 3/PE- (3W+G) 7.5 A/PHASE	200/208 VAC, 3/PE- (3W+G) 15 A/PHASE 380/400 VAC, 3/PE- (3W+G) 7.5 A/PHASE	200/208 VAC, 3/PE- (3W+G) 30 A/PHASE 380/400 VAC, 3/PE- (3W+G) 15 A/PHASE
Cooling System	Water flow at 2.0 Gal./Min. (7.6 LPM) minimum at +5°C to +35°C. Connections provided to accept 1/4" male (NPT) pipe thread.	Water flow at 2.0 Gal./Min. (7.6 LPM) minimum at +5°C to +35°C. Connections provided to accept 3/8" male (NPT) pipe thread.	
Power Readout	Digital readout displays frequency and forward, reflected and load power.		
Compliance	CE, CAN/CSA-C22.2 No. 61010-1, UL 61010-1		
Weight	32.5 lbs. (14.8 kg)	55 lbs. (24.9 kg)	91 lbs. (41.3 kg)
Dimensions (H x W x D) (excluding handles & connectors)	3.5" x 19" rack mount x 20.0" (89 x 483 x 508 mm.)	5.25" x 19" rack mount x 20.5" (133 x 483 x 521 mm.)	8.72" x 19" rack mount x 22.1" (221 x 483 x 560 mm.)
Remote Interface Connectors	Standard: RS-232 Subminiature Type-D 9-pin digital; optional custom interface cards available.		
RF Output Connector	Type N		Type HN
Rack Mounting	EIA (Standard) 19-inch adapters supplied		

Ordering Options

- **Additional Leveling Types**
 - Forward Power Leveling
 - Load Power Leveling
- **Automatic Frequency Tuning (\pm 5%)**

Contact your local account representative for pricing, availability, and applications guidance.



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