



*SmartPower® Intelligent
Microwave Power
Generator available
in power levels of 1.8 and
3 kW*

SmartPower®

MODEL AX2500 SERIES INTELLIGENT MICROWAVE POWER GENERATORS

SmartPower® AX2500 Series intelligent microwave power generators are built on proven experience in designing rugged, reliable microwave power generators for demanding semiconductor fabrication and industrial applications. The compact AX2500 design architecture incorporates field-proven technology, and combines new design features aimed at improved performance and lower cost of ownership.

The SmartPower AX2500 Series consists of two models that cover a spectrum of continuous microwave power from 180 W to 3 kW. Model AX2518 has maximum performance of 1.8 kW and 3 kW for the AX2530. Frequency output is 2.455 GHz \pm 15 MHz.

Features & Benefits

- Available in 1.8 and 3 kW power levels for 200 and 300mm applications
- Microprocessor-controlled filament cutback extends magnetron tube lifetime. Field-replaceable magnetron tubes lower overall CoO
- Accurate power measurement and feedback ensures high repeatability
- Compact, modular design enhances cross-platform compatibility

Plasma &

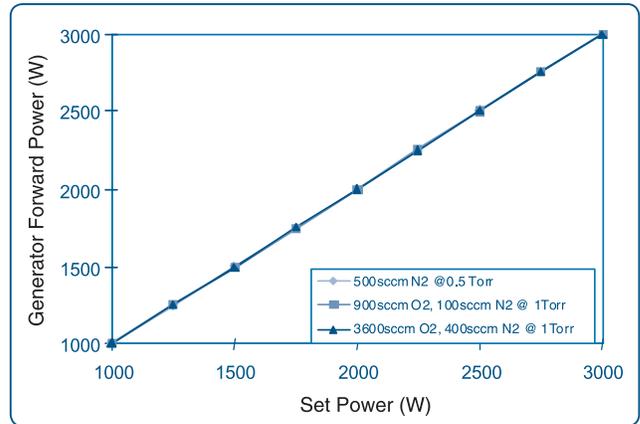
**Reactive Gas
Solutions**

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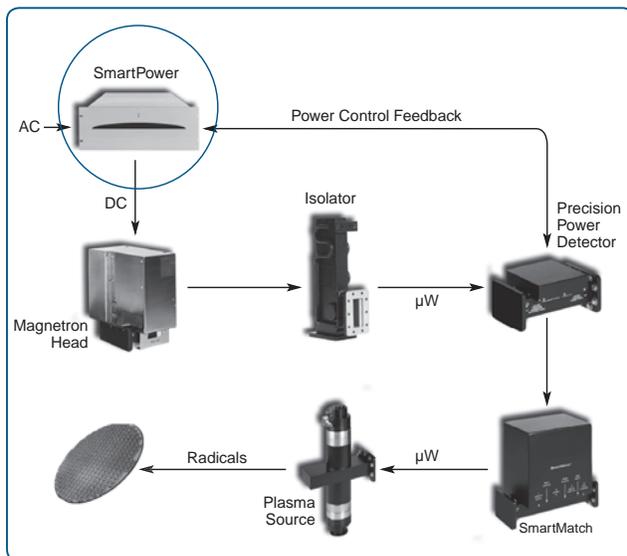
All generators share a common, modular architecture and accurate power measurement, feedback and control for increased process control and reproducibility. All models have feedback-controlled power regulation of 0.1% of output power (line and load) and ripple of $<\pm 1\%$ of output power. PrecisionPower™ technology (derived from MKS patented SmartMatch™ intelligent microwave matching unit) improves accuracy of power control to $<\pm 1.5\%$ of maximum power for increasing process consistency and yield. In addition, the PrecisionPower™ technology allows magnetrons to be replaced in the field, substantially reducing cost of ownership.

The AX2500 Series SmartPower® control technology monitors the generator's operating system and provides power shutdown protection and intelligent diagnostics. The simple messages displayed on the SmartPower® generator front panel give the user all the information needed to understand system status, reduce MTTR and ensure maximum uptime.



Power Accuracy —

SmartPower® generator microwave power accuracy during plasma operation. Forward power within $\pm 1.5\%$ of maximum power. Tests performed using AX7610 applicator. Reflected power minimized with SmartMatch to less than 1% in less than 2 sec.



Microwave Plasma Subsystem



Specifications

Overall Systems

Power Output	AX2518: 180 W to 1.8 kW AX2530: 300 W to 3.0 kW
Frequency	2440 - 2470 MHz
Regulation	Better than 1% of output power (line and load)
Ripple	AX2518: $\pm 1\%$ of output power AX2530: $\pm 1\%$ of output power
Output Accuracy	AX2518: $\pm 1.5\%$ (from 20-100% of max. power) AX2530: $\pm 1.5\%$ (from 20-100% of max. power)
Ambient Temperature	Up to 40°C maximum
Generator to Head Distance	Up to 100 feet maximum
Microwave Connections	WR284F waveguide with CPR284F flanges
Remote Control	Analog, RS485, DeviceNet™
AC Power Input	200/208 VAC $\pm 10\%$, 3 phase, 50/60 Hz
Compliance	CE (option configuration), ETL, SEMI F47, SEMI S2-93A

Generator (AX2518PS, AX2530PS)

Size	7.0"H x 19"W x 23"L (178 x 483 x 584mm)
Cooling	Water, 1.5 gpm, 30°C maximum @ 30 psid minimum

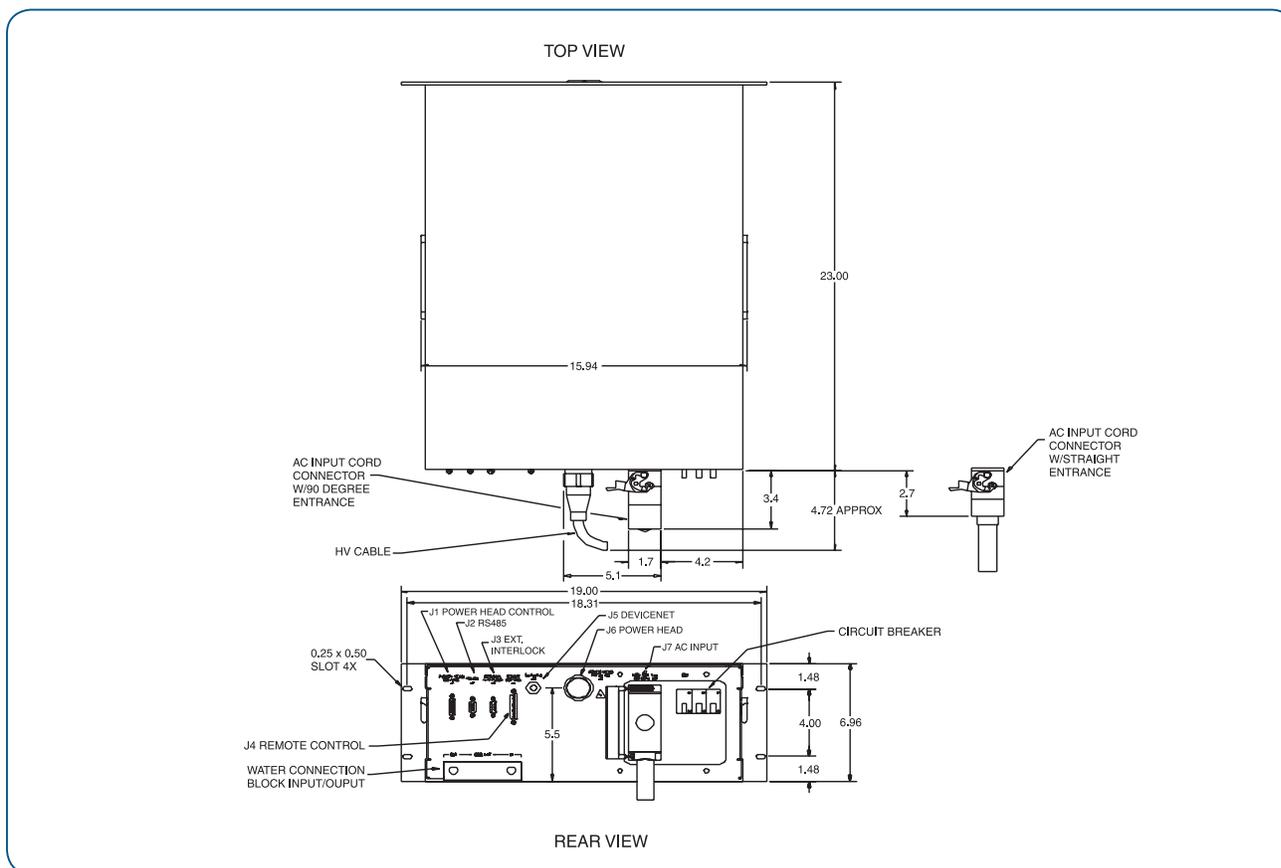
Power Heads

AX2518RH, AX2530RH	10"H x 7.62"W x 14.5"D (254 x 193.5 x 368.3mm)
Cooling	Water, air



Ordering Information

Please contact your local MKS sales office for price and availability information.



Dimensional Drawing —

Note: Unless otherwise specified, dimensions are nominal values in inches.



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