

AX2530

SmartPower® Intelligent Microwave Power Generator



The AX2530 SmartPower® intelligent microwave power generator is a rugged, reliable microwave power generator for demanding 200 and 300mm semiconductor fabrication and industrial applications. The compact design architecture incorporates field-proven technology with features resulting in improved performance and lower cost of ownership.

The AX2530 is available with 3 kW power and a frequency output of 2.455 GHz \pm 15 MHz.

Product Features

- 3 kW power level
- 2440 - 2470 MHz Frequency
- Analog, RS485, or DeviceNet™ communication
- Air and water-cooled
- Compact, modular design

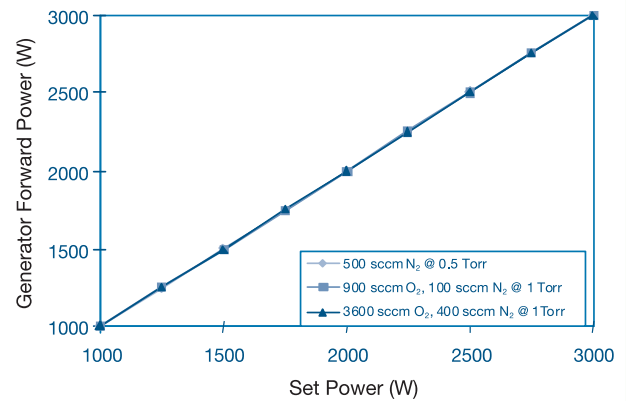


Key Benefits

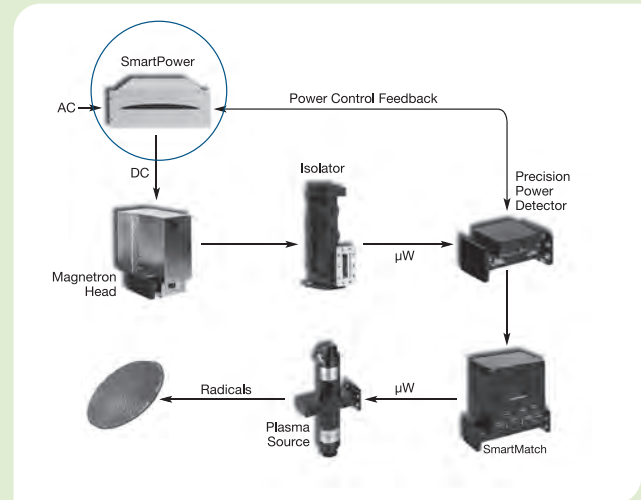
- Microprocessor-controlled filament cutback extends magnetron tube lifetime
- Field-replaceable magnetron tubes lower overall CoO
- Accurate power measurement and feedback ensures high repeatability

The AX2530 has a modular architecture and accurate power measurement, feedback and control for increased process control and reproducibility. It has 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 power control accuracy 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 AX2530 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 the AX7610 applicator. Reflected power minimized with SmartMatch® unit to less than 1% in less than 2 seconds.

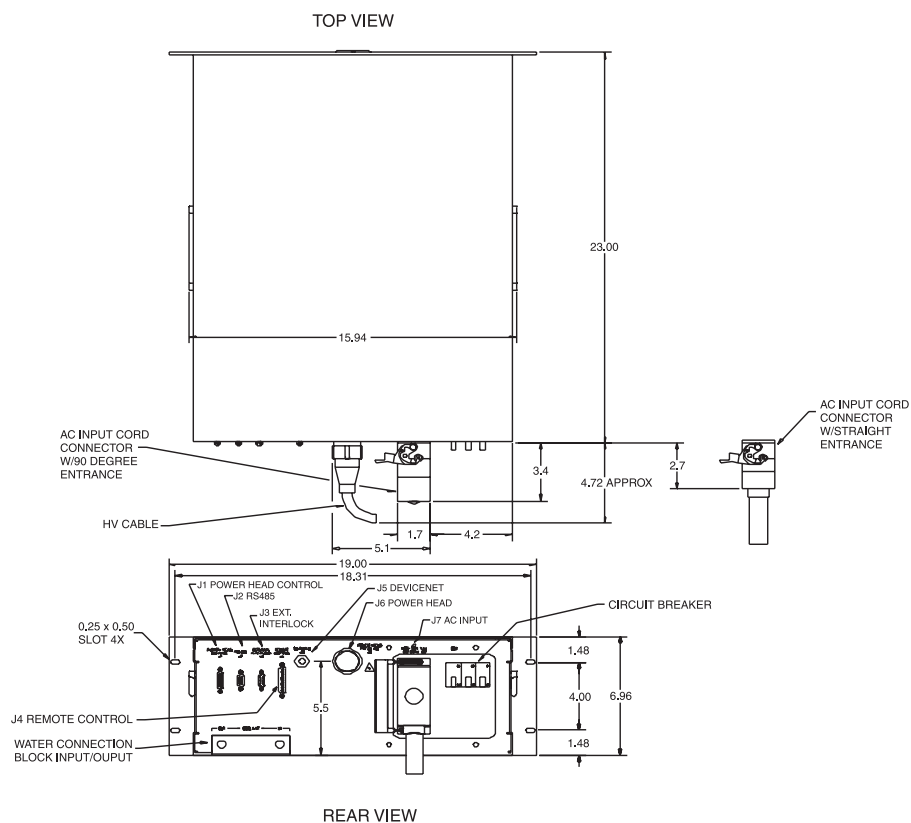


Microwave Plasma Subsystem

Specifications

Overall Systems	
Power Output	3 kW
Frequency	2440 - 2470 MHz
Regulation	Better than 1% of output power (line and load)
Ripple	±1% of output power
Output Accuracy	±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 ±10%, 3 phase, 50/60 Hz
Generator (AX2530PS)	
Size	7.0"H x 19"W x 23"L (178 x 483 x 584 mm)
Cooling	Water, 1.5 gpm, 30°C maximum @ 30 psid minimum
Power Heads (AX2530RH)	
Size	10"H x 7.62"W x 14.5"D (254 x 193.5 x 368.3 mm)
Cooling	Water, air

Dimensional Drawing



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

Ordering Information

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