

Retrofit: RFG/RFDS 1250 to Paramount 1250

Digitally Controlled RF Power Supply with Increased Reliability and Functionality

The Advanced Energy (AE) Retrofit Program aims to replace existing, aged AE legacy products with a new drop-in solution. With a retrofit of your existing RFG/RFDS 1250 units to the Paramount® 1250, Total Cost of Ownership improvements can be realized through reduced tool down time and improved process and wafer yields.



Overview

As semiconductor tools and process power components age, factories are seeing increases in failure rates and repair costs of those components. A retrofit of RFG/RFDS 1250 to Paramount 1250 provides a reset of the unit life, and an upgrade in unit capability and reliability. A retrofit maximizes tool uptime while reducing overall maintenance costs.

The RFG/RFDS product line is no longer in production. Retrofitting your RFG or RFDS is the preferred service option as:

- Used equipment available on the market is in unknown condition
- Repairing existing units could be limited in the future due to obsolete components

Total Cost of Ownership (TCO)

TCO in the process power space on a semiconductor tool extends beyond the transactional cost of a repair:

- Tool down time: lost production dollars
- Wafer scrap
- Wafer yield

Benefits

- Increased uptime with longer Mean Time Between Failure (MTBF)
- Lower overall maintenance costs
- Performance equivalent to processes with new tools
- Additional features allow for enhanced process control or new process development
- Enhanced plasma stability and process repeatability

Features

- Includes 12-month, whole-box warranty
- Supports wafer fabrication with partnership of AE refurbishment experts
- Resets the clock on aging tools
- Provides cost-effective, modern replacements for discontinued or aging plasma generators
- Presents an efficient upgrade process that is replicable for subsequent tools
- Retrofit kit is designed to be a seamless drop-in replacement for existing RFG/RFDS 1250
- Improved data logging features enable monitoring of unit health and process trends
- Provides convenient access to system controls and diagnostics through Virtual Front Panel

Return on Investment (ROI)¹

The AE Quality Advantage - Maximizing Uptime

With a retrofit of RFG/RDS 1250 to Paramount 1250:

- Save up to **86%** annually on repair and maintenance costs with new units²
- See a five-year ROI³ of **245%**
- Break even in **1.45** years

¹ Figures are for illustrative purposes only. Contact AE for a customized ROI calculation specific to your install base. Trade-in and volume discounts are also available.

² Annual savings achieved through reduced tool downtime, improved process and wafer yields, and efficiency gains.

³ Figures calculated off of 30-unit population.

Specification Comparison - RFG/RFDS 1250 to Paramount 1250

With the inclusion of a retrofit kit, which contains all required interfaces and adapters, transitioning to a newer product is made seamless by eliminating equipment changes.

Feature	RFG/RFDS 1250	Paramount 1250	Benefits to Retrofit
Common Exciter (CEX)	Available	Available	Synchronous operation
Dynamic Response	< 20 ms rise and fall time	< 2 ms rise and fall time	Faster process / higher throughput
Power Threshold	12.5 W – 1250 W	5 W – 1250 W	Lower power range available
Power Accuracy	± 4% or 0.8 W	± 2% or 1.5 W	Tighter process control
Reflected Power	250 W	250 W	No change
Sag / Surge Protection	Not Available	SEMI F47	Fewer process interruptions
Analog Interface	25-pin RFG Type	25-pin RFG Type	No change to analog cable
RF Output Connector	Type N, Female	Type N, Female	No change to output cable
Input Power	200/208 V – 3 ph	200/208 V – 3 ph	No electrical panel rewiring
Weight	< 15 kg	< 16 kg	Similar weight
Height	124 mm	132 mm	Should not affect mounting
Width	177.8 mm	216 mm	Should not affect mounting
Depth	381 mm	442 mm	Rack ear extensions provided with retrofit
Cooling	Water	Water / Air	Mixed cooling
Water Fittings	1/4" push-in fittings	3/8" NPT (f)	Adapter provided

Get in Touch

To learn more about your retrofit options, contact Advanced Energy Technical Support at technical.support@aei.com or reach out to your local Service Center.

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