



GENERAL INFORMATION

The BPAPFC-100 kW microwave generator is an air-cooled power supply for a 100 kW / 915 MHz magnetron. This power supply is designed based on modular interleaving technology to reduce input and output ripple as well as having the ability to protect the magnetron from over voltage and over current.

The BPAPFC-100 kW autonomously manages the operating status of the magnetron and adjusts the filament voltage according to the input power of the magnetron and switches off the output when alarm events such as overcurrent or overvoltage of the magnetron occur.

FEATURES

- Very low energy discharge while heavy short circuit fault of magnetron
- Ability of the generator to continue operation at a lower power level in the event of a power supply module failure in the SMPS.
- Ability to replace a failed module with a functional one in less than 5 minutes.
- Ability to adjust of the anode voltage from 15 kV to 21 kV based on the magnetron performance chart to reach the optimized working point having max. efficiency/lifetime of Magnetron.
- Lower weight and lower output voltage ripples compared to the old transformer-based technology generators
- Air cooling
- Cutting edge interleaved resonance switching topology
- Adaptive to all 100 kW magnetrons made by different companies
- High efficiency up to 93 % including PFC
- Power Factor Correction up to 0.97 at full load
- Fault tolerant SMPS
- High reliability (designed based on MIL-HDBK-338B and MIL-HDBK-217 standards)
- Low noise SMPS
- Adjusting the magnetron power from 1 kW to 100 kW in 0.5 kW steps
- Constructed using high quality power electronics and mechanical components all provided in Germany

SPECIFICATION

Electrical and Technical Data

	BPAPFC100kW380	BPAPFC100kW400	BPAPFC100kW480
Input voltage	380 V _{AC} ± 10 %	400 V _{AC} ± 10 %	480 V _{AC} ± 10 %
Efficiency (including PFC)	up to 93 %	up to 93 %	up to 93 %
Input frequency		47 Hz to 63 Hz	
Power Factor Correction		≤ 0.97 at full load	
Output voltage adaptivity		15kV - 21kV	
Anode current variation range		300 mA to 6000 mA	
Absolute maximum output power of Magnetron		100 kW	
Output voltage ripple		Less than 1%	
Anode current ripple		Less than 2%	
Active operating temperature		-20 °C to 50 °C	
HV Protections	Over temperature/ Over current/ Overvoltage/ Over load/ Under voltage/ Under load/ Short circuit		
Working humidity		20 % ~ 90 % RH non-condensing	
Storage temperature, humidity		-30 °C ~ +70 °C, 10 % ~ 95 % RH non-condensing	
Withstand voltage		30 kV	