



GENERAL INFORMATION

The BPAPFC-20 kW microwave generator is an air-cooled power supply for both 20 kW 2.45 GHz / 915 MHz magnetrons. 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 overvoltage and overcurrent.

The BPAPFC-20 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. It is built into a self-ventilated 19" aluminum housing with the 14-U height.

FEATURES

- Air cooling
- Resonance-isolated ZCS/ZVS high frequency topology
- Adaptive to 20 kW magnetrons with different voltages
- High efficiency
- Power Factor Correction up to 0.97
- Fault tolerant SMPS
- Modular design- the SMPS can continue operating at lower power even if one (or more) module/cell fails
- High accuracy output current control
- Low-ripple anode current
- Protections: Overtemperature / Overcurrent / Overvoltage / Overload / Under voltage / Under load / Short circuit
- LED indicators for: power on, interlock, preheating, microwave active, alarms
- High reliability (designed based on MIL-HDBK-338B and MIL-HDBK-217 standards)
- Able to be connect in parallel with similar SMPS units
- Output voltage ripple control
- Low noise SMPS
- Very low energy discharge while heavy short circuit fault of magnetron
- Generator can continue operating at reduced power in the event of an SMPS module failure
- Adjustable anode voltage according to the magnetron performance chart to achieve the optimum working point for maximum efficiency and magnetron lifetime
- Ability to be controlled via PLC, PC or Profinet

SPECIFICATION

Electrical and Technical Data

	BPAPFC20kW380	BPAPFC20kW400	BPAPFC20kW480
Input voltage (Three phase)	380 V _{AC} ±10 %	400 V _{AC} ±10 %	480 V _{AC} ±10 %
Efficiency	up to 95 %	up to 96 %	up to 96 %
Input frequency		47 Hz to 63 Hz	
Power Factor Correction		≤ 0.97 at full load	
Output voltage adaptivity		12 kV to 15 kV	
Anode current variation range		35 mA to 2100 mA	
Absolute maximum output power of SMPS		32 kW	
Active operating temperature		-20 °C to +50 °C	
Working humidity		20 % ~ 90 % RH non-condensing	
Storage temperature, humidity		-30 °C ~ +70 °C, 10 % ~ 95 % RH non-condensing	
Withstand voltage		25 kV	
Dimensions of SMPS		744 × 624 × 483 mm	