



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

	BPAPFC20kW
Input voltage (Three phase)	345 V _{AC} to 525 V _{AC}
Efficiency	up to 96 %
Input frequency	47 Hz to 63 Hz
Power Factor Correction	≤ 0.97 at full load 12
Output voltage adaptivity	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