BPAPFC-Series Microwave Generators
for 15 kW 2.45 GHz Magnetrons





GENERAL INFORMATION

The BPAPFC-15 kW microwave generator is an air-cooled power supply for a 15 kW / 2.45 GHz 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 overvoltage and overcurrent.

The BPAPFC-15 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 magentron occur. It is built into a self-ventilated 19" aluminum housing with the 12-U height.

FEATURES

- Air cooling
- Resonance-isolated ZCS/ZVS high frequency topology
- Compatible with 15 kW magnetrons with different voltages
- High efficiency
- Power Factor Correction up to 0.97
- Fault tolerant SMPS
- Modular SMPS: continues operating at reduced power if modules fail
- Low anode current ripple
- Full Protections: Overtemperature / Overcurrent / Overvoltage / Overload / Undervoltage / Underload / 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

	BPAPFC15kW
Input voltage (Three phase)	345 V_{AC} to 525 V_{AC}
Efficiency	up to 93 %
Input frequency	47 Hz to 63 Hz
Power Factor Correction	≦ 0.97 at full load
Output voltage adaptivity	11kV to 12kV
Anode current variation range	180 mA to 2000 mA
Absolute maximum output power of SMPS	24 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	20 kV
Dimensions of SMPS	744 × 624 × 483 mm

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