BPAPFC-Series Microwave Generators
for 10 kW 2.45 GHz Magnetrons

GENERAL INFORMATION

The BPAPFC-10 kW microwave generator is an air-cooled power supply for a 10 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 over voltage and over current.

The BPAPFC-10 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 7-U height.

FEATURES

- Air cooling
- Resonance-isolated ZCS/ZVS high-frequency topology
- Compatible with 10 kW magnetrons of various voltages
- High efficiency with PFC up to 0.97
- Fault-tolerant SMPS
- Modular SMPS: continues operating at reduced power if modules fail
- Precise output current control
- Low anode current ripple
- Full protection: Overtemperature / Overcurrent / Overvoltage / Overload / Undervoltage / Underload / Short circuit
- LED indicators: power on, interlock, preheat, microwave active, alarms
- High reliability (MIL-HDBK-338B & MIL-HDBK-217 based)
- Parallel operation with similar SMPS units
- Output voltage ripple control
- Low-noise SMPS
- Minimal energy discharge during magnetron short-circuit faults
- Continued operation at reduced power during SMPS internal module failure
- Adjustable anode voltage (via magnetron performance chart; for adjustable solenoid)
- Controllable via PLC, PC, or Profinet

SPECIFICATION

Electrical and Technical Data

	BPAPFC10kW380	BPAPFC10kW400	BPAPFC10kW480
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		8 kV - 10 kV	
Anode current variation range		160 mA to 1600 mA	
Absolute maximum output power		16000 W	
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 × 311× 483 mm	

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