BPAPFC-Series Microwave Switched-Mode Power Supply (SMPS)
for 1 kW 2.45 GHz Magnetrons

GENERAL INFORMATION

The BPAPFC1kW is an air-cooled Switched-mode power supply for a 1 kW / 2.45 GHz magnetron. This power supply is designed for high reliability applications which includes power factor correction (PFC), and high frequency switching up to 100 kHz effectively minimizes output current ripple. The incorporation of fast overvoltage and overcurrent protection mechanisms, in addition to the standard protection features, contributes to an extended operational lifespan of the system.

FEATURES

- Air cooling
- Resonance isolated ZCS/ZVS high frequency topology
- Adaptive to all 1 kW magnetrons
- Active Power Factor Correction (PFC) up to cos φ 0.96
- High efficiency
- High accuracy output current control
- Low ripple anode current
- Protections: magnetron-head/SMPS over temperature, short circuit, fast over/under voltage, fast over/under current
- LED indicators: 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 SMPSs
- Low noise SMPS
- Adoptable Filament power supply to industrial Magnetron head
- Ability to control by PROFINET/analog/PWM using PLC, or PC-based protocols

SPECIFICATION

Electrical and Technical Data

	BPAPFC1kWS
Input voltage, 1-phase	90 VAC to 260 VAC
Efficiency	Up to 93 %
Power Factor	0.96
Input frequency	47 Hz to 63 Hz
Output voltage adaptivity	4 kV to 5 kV
Anode current	15 mA to 350 mA
Absolute maximum output power	2.15 kW
Active operating temperature	-20 °C to +50 °C
Working humidity	20 % to 90 % RH non-condensing
Storage temperature, humidity	-30 °C to +70 °C, 10 % to 95 % RH non-condensing
Withstand voltage	8 kV
Size (WxHxD)	217 mm x 240 mm x 330 mm

Technical changes reserved

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