



## 10 to 100MHz Wide-Band RF Amplifiers 100 Watts and 300 Watts



The two models of **Wide-Band RF Amplifiers** manufactured by **Coaxial Power Systems Ltd** are precision units intended for scientific and industrial applications. Their robust construction using the latest in switch mode and solid-state design techniques ensure a long and trouble-free life even in harsh environments.

The two models in the range are:

- RFA100WB 0 to 100 W
- RFA300WB 0 to 300 W

Manual impedance matching networks are available for use in conjunction with these amplifiers together with a suitable signal generator – please see separate brochure

for details.

The main features of all models are:

- Proven design and track record
- ½ rack ,4U (177mm) high
- Individual LED displays for incident (forward) and reflected power.
- Precision power control +/- 1% of set point.
- Full output over the frequency range 10MHz to 100MHz

The output power of each amplifier is fully adjustable between zero and maximum power. The feedback control system ensures that the set output power remains constant and repeatable. Incident (forward) and reflected power measurements are internally calibrated to give high accuracy throughout the power range.

An external voltage of 0 to 5Volts can be used to control the output. This is particularly useful in low pressure plasma applications where the d.c. voltage developed across the plasma dark space can be controlled rather than the RF power.

The design of the amplifier is modular with separate RF driver, switch mode power supply and RF power amplifier . These units are easily removed from the chassis in the unlikely event that a replacement becomes necessary.

## General Specifications – Wide-Band Amplifiers

### **Model RFA100WB**

### **Model RFA300WB**

#### **Output frequency**

10MHz to 100MHz

#### **Output power**

RFA100WB 100Watts

RFA300WB 300Watts

#### **Output impedance**

50Ω

#### **Output connection**

N type/50Ω

#### **Input**

BNC input 50Ω 5dBm

#### **Power control**

Analogue control system allows power or external feedback control. Output stability +/-1% for +/-15% variation in line.

#### **Meters**

3 1/2 digit LED display of incident (forward) and reflected power.

#### **VSWR capability**

Can withstand any VSWR at any phase angle

#### **Harmonic output**

Better than 15dB below fundamental

#### **Front panel controls**

RF on

RF off

Output power set

#### **Front panel indicator**

RF power on

RF power off

Reflected power exceed limit

Remote operation

Cooling interlock

External interlock

#### **Rear panel**

#### **switches/connectors**

Remote connector (15way 'D')

Input signal source (BNC)

(min 5dBm)

Line input (I.E.C.)

RF output connector (N50Ω)

#### **Remote control**

Accessed via rear panel 15 way

'D' type socket indicators:

RF on/off (open collector 100mA)

Incident power

Reflected power

RF on/off (contact closure)

Interlock (contact closure)

Output set 0-5Volts = 0-100%

Remote output set request

External feedback

Remote RF on/off request

#### **Cooling**

Forced air - air intake around chassis cover, exhaust through rear

#### **Line**

110/230 VAC single phase

50/60Hz

#### **Size**

1/2 rack mounting 4U high

550mm deep (external

connectors may protrude an extra 50mm)

#### **Weight**

18kg

#### **Finish**

Front Panel -RAL7135 light grey

Rear Panel - Chromated Aluminium

Cover - Passivated Steel

#### **Environment**

Operating temperature:

0-35°C (-20° to +65° C

storage)

#### **Standards**

Safety: EN601010

Emissions:EN 61000-6-4

Immunity:EN61000-6-1

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#### **Other Products Manufactured By Coaxial Power Systems Ltd Include:**

- **Low Power RF Generators – 50Watts to 600Watts**
- **Medium Power RF Generators – 1kWatt to 3kWatt**
- **High Power RF Generators – 5kWatt to 25kWatt**
- **Very High Power Generators – 30kW to 100kWatt**
- **Impedance Matching Networks for all sizes of generator**
- **Plastic Welding Power Supplies**
- **Wood Glue Curing Systems**
- **Vacuum Deposition Systems:**

**Sputter Coating**

**Plasma & Reactive Ion Etching**

**Ashing**

**PECVD**

**Diamond Deposition**

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