



## RFA-300WB

The RFA 300WB (10-100mhz) Wide-Band RF Amplifiers 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 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.



### Main features

- Proven design and track record
- The output power of each generator 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 sputter coating applications where the d.c. voltage developed across the plasma dark space can be controlled rather than the RF power.
- Compact Half-rack / 4U (177mm) format.
- 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

**(Non-standard frequencies are available - please contact factory for details).**

### Recommended Equipment

#### **CPS-TGR1040 – Signal Generator**



**\* SEE SEPARATE DATASHEET FOR MORE INFORMATION**

ELECTRICAL		MECHANICAL
<b>Output frequency</b> RFA 300-WB (10-100Mhz)	<b>Meters</b> <b>LED display of:</b> 1. Incident power (forward). 2. Reflected power.	<b>Standards</b> <ul style="list-style-type: none"> <li>EN61000-3-2:2006.</li> <li>EN61000-3-3/A2:2005.</li> <li>EN61326-1:2006.</li> <li>EN61010-1:2001.</li> <li>CE compliance.</li> <li>Fully ROHS Compliant.</li> </ul>
<b>Output power</b> 1000 Watts	<b>Front panel controls</b> <ul style="list-style-type: none"> <li>RF power ON.</li> <li>RF power OFF.</li> <li>RF output power.</li> </ul>	<b>Size</b> <ul style="list-style-type: none"> <li>Half-Rack mounting, 4U high</li> <li>Length : 502mm</li> <li>Height : 171mm</li> <li>Width (Inc Front Panel) : 239mm</li> <li>Width (Not inc Front Panel) : 208mm</li> </ul>
<b>Output impedance</b> 50Ω.	<b>Status indicators:</b> 1. Reflected power exceed limit. 2. Remote operation. 3. Cooling interlock. 4. External interlock	
<b>Output connection</b> N type/50Ω.	<b>Input</b> BNC input 50ohm 5dBm	<ul style="list-style-type: none"> <li>Half-Rack mounting, 4U high</li> <li>Length : 502mm</li> <li>Height : 171mm</li> <li>Width (Inc Front Panel) : 239mm</li> <li>Width (Not inc Front Panel) : 208mm</li> </ul>
<b>Power control</b> <ul style="list-style-type: none"> <li>Analogue control system allows power or external feedback control.</li> <li>Output stability is +/-1% for +/-15% variation in line.</li> </ul>	<b>Rear panel</b> <ul style="list-style-type: none"> <li>Remote connector (15-way 'D').</li> <li>Line input (I.E.C.).</li> <li>RF output connector (N50Ω).</li> <li>Input signal source (BNC) - min 5dBm</li> <li>Mains switch.</li> </ul>	
<b>VSWR capability</b> Can withstand any VSWR at any phase angle.	<b>Remote control (Rear Panel)</b> 15-way 'D' type socket.	<b>(external connectors may protrude an extra 50mm)</b>
<b>Harmonic output</b> Better than 15dB below fundamental.	<b>Remote control</b> 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	<b>Finish</b> <ul style="list-style-type: none"> <li>Front Panel -RAL7035 light grey.</li> <li>Rear Panel - Stainless steel.</li> <li>Cover - Stainless Steel.</li> </ul>
<b>Output envelope</b> Ripple less than 1% of full amplitude.	<b>Remote control</b> 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	<b>Cover - Aluminium (optional).</b> <b>Rear Panel - Aluminium (optional).</b>
<b>Pulse operation</b> <ul style="list-style-type: none"> <li>TTL input via SMA socket on rear panel.</li> <li>Minimum pulse width 10μs.</li> <li>Minimum duty cycle 5%.</li> <li>Minimum Frequency 100Hz.</li> <li>The external power control signal should vary the peak output from 0 to 500W, with a pulse-on duty cycle from zero to continuous DC (100% duty cycle).</li> <li>The front panel display automatically shows pulse output levels by utilising sample/hold technology.</li> </ul>	<b>Remote control</b> 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	<b>Environment</b> <ul style="list-style-type: none"> <li>Operating temperature: 0-35°C (-20° to +65° C storage).</li> </ul>
<b>Line</b> <ul style="list-style-type: none"> <li>110/240 VAC single-phase.</li> <li>50/60Hz.</li> </ul>	<b>Remote control</b> 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	<b>Weight</b> 18kg
		<b>Cooling</b> Forced air - air intake through rear, exhaust.
		<b>Intake and Exhaust</b> Air intake through rear exhaust around chassis cover.
		<b>Notes</b>

## Warranty

Coaxial Power Systems Ltd offer a warranty for parts and labour (if returned to factory) for 1 year from date of despatch. The warranty is invalidated if the generator has suffered inappropriate treatment i.e. excessive vibration, mechanical denting or dropping, accidental liquid spill, excessive applied voltage to remote connectors etc. Coaxial Power Systems Ltd should be notified of all warranty claims before return of equipment.

## Contact

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