The RFA901-B series are a range of air-cooled power amplifiers suitable for driving Isomet acousto-optic modulators and deflectors. The frequency input is compatible with the ISOMET iDDS-1-U high speed, direct digital frequency synthesiser. This amplifier features both digital gate and analog modulation inputs for the control of the RF amplitude. Protection includes an internal over temperature sensor and a ‘TranZorb’ over voltage diode on the DC supply input. An external interlock (or RF enable) input is provided.

The RFA901-B will operate from a +24Vdc to +28Vdc supply. LED’s indicate the status of the thermal interlocks, DC supply and RF power. The maximum RF output power is adjusted by means of a pre-set potentiometer.

This standard amplifier requires forced air-cooling. An optional fan and cover assembly or a water cooled top plate can be provided. Please specify options at order.

### Freq' Identifier | Option
--- | ---
RFA901 - B - X
30 - 50MHz 0 F Fan
40 - 60MHz 1 W Water
60-100MHz 2 Cooled

### SPECIFICATION

- **Power Output**: > 12 Watts Max CW
- **Load Impedance**: 50Ω
- **Harmonic Distortion**: >20dB below fundamental
- **1.5dB Bandwidth (-B)**: see table
- **Input Signal (SMA)**: 3dBm nominal
- **Input Impedance**: 50Ω nominal
- **Modulation Control Voltage**
  - **Digital**: TTL compatible (> 2.7V, RF O/P=on)
  - **Analog**: 0.0 to 10.0V *, 1Kohm i/p impedance (nominal)
- **RF ON to OFF Ratio**: 40dB below full power
- **Output Switching Speed**: < 0.1 µs Rise / Fall time, 0 to 10 Watts
- **Interlock**: Open OFF, closed ON
  - **Sink 20mA at 24V**
- **Power Supply**: +24V to +28Vdc, 0.25% regulation, < 2A
  - (+15Vdc available on certain models)
- **Temperature Range**: 0º to 60ºC, Thermal Shutdown Interlock

[* Other options available 0-1V, 0-5V]
RFA901-B-x
RF Amplifier

RF Output : BNC
RF Input : SMA

Control signals -
- Amplitude Control, Digital : +sig pn6, -rtn pn7
- Amplitude Control, Analog : +sig pn8, -rtn pn9
- Interlock enable (connect to AO) : +sig pn4, -rtn pn5 (closed = on)
- Interlock monitor, TTL compatible : +sig pn1, -rtn pn2 (+5V = OK, 0V = fault)

Power Input : Feed through filter solder tag

OUTLINE DRAWING

Dimensions: mm

Model RFA901-2-F shown

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
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Quality Assured.
In-house: RF & Digital design
Software Development
OEM manufacture