

# RFA1170/4-ZP

## RF Power Amplifier



0420

The Model RFA1170/4-ZP is a class AB amplifier designed to drive the LS700-1109-10 Germanium Acousto-Optic Cells with > 240Watts across a 55-105 MHz bandwidth. There is zero phase shift between the outputs at all frequencies. The amplifier is optimised for high rep-rate duty cycle applications that also require very fast RF rise and fall times.

The RFA1170/4-ZP requires a frequency input source such as the Isomet quad channel iMS4 programmable synthesizer or a customer supplied all waveform generator. (An integral RF splitter / pre-amp circuit is provided to interface third party single channel signal sources to the quad output RFA1170/4-ZP).

The RFA1170/4-ZP includes a number of additional features to aid diagnostics and control:

- Data values representing the forward and reflected RF power for each output (Qualitative).
- Measurement of the DC current draw for each RF channel. (Qualitative).
- Thermal Interlock and real time temperature measurement for the Amplifier and associated AO deflector.
- Interlock and diagnostic connection to LS700 series AOD's
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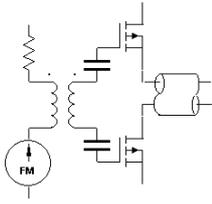
These features are an option and require a USB serial interface and software.

### SPECIFICATIONS

Power out:	< 60 Watts max. CW into 50 $\Omega$ per output
Frequency response:	55 - 105 MHz
Flatness:	+/- 1dB
Gain Input to Each Output:	48dB nominal
Input / Output impedance:	50 $\Omega$ Nominal
Input power	0dBm / 1mW / 0.64Vpp (50 $\Omega$ ) typical, 5dBm / 3mW / 1.1V pp MAX
Input VSWR:	< 2.0:1
RF rise/fall time	10n / 5nsec for 0-45W output
2 <sup>nd</sup> Harmonic Distortion:	> 20 dB below fundamental at 50W output
3 <sup>rd</sup> Harmonic Distortion:	> 15 dB below fundamental at 50W output
RF gate	TTL high = RF outputs enabled, Low = OFF
Thermal interlocks	Compatible with LS700-1109
Power Supply Requirement:	24A average, 40A peak at +24Vdc
Water Cooling:	Maintain water flow at > 1litre/min / <25°C (Corrosion inhibitor recommended)

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



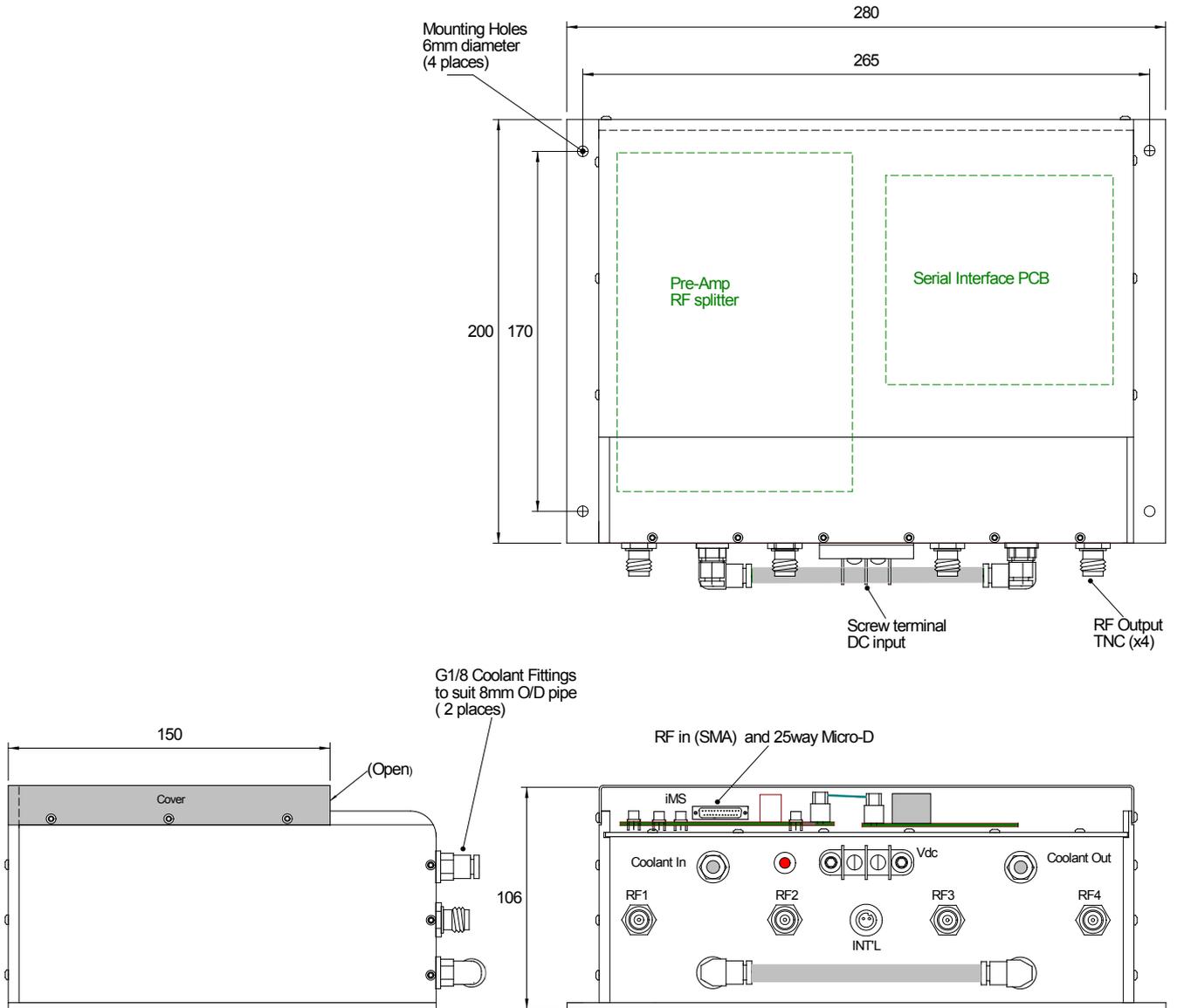
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### OUTLINE DRAWING



Shown with optional USB interface card.

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