



# RFA241

## RF Driver / Amplifier



1120

The RFA241 is a combined 40 MHz oscillator and power amplifier suitable for driving Isomet acousto-optic modulators such as models M1208 and M1396. This standard driver 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 (RF enable) input is provided.

The RFA241 will operate from a +24V 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.

The amplifier includes an integral water cooled base. The unit can be supplied with the coolant fittings located at the front (RFA241) or rear (RFA241-R). See options.

### SPECIFICATION

Power Output	:	> 90 Watts Max CW (28V supply) > 70 Watts Max. CW (24V supply)
Load Impedance	:	50Ω
Harmonic Distortion	:	>20dB below fundamental
Mismatch Tolerance	:	Driver will not oscillate
Centre Frequency	:	40.0 MHz
Frequency stability	:	± 25ppm
Frequency accuracy	:	± 25ppm
Modulation Control Voltage	:	
Digital	:	TTL compatible (> 2.7V, RF active)
Analog	:	0.0 to 10.0V, 3Kohm i/p impedance (nominal)
RF ON to OFF Ratio	:	40dB below full power
Output Switching Speed	:	< 200ns rise / < 50ns fall, 0 to 60 Watts
Interlock	:	Open OFF, closed ON Sink 20mA at Vdc
Temperature Range	:	0° to 50°C, Thermal Shutdown Interlock
Control signals -	:	9 pin 'D' type
Gate, Digital (5V logic)	:	+sig pn6, -rtn pn7
Modulation, Analog (0 – 10V)	:	+sig pn8, -rtn pn9
Interlock enable (connect to AO)	:	+sig pn4, -rtn pn5 (closed = on)
Interlock monitor, 15V logic	:	+sig pn1, -rtn pn2 (+15V = OK, 0V = fault)
Power Supply, Vdc	:	+24V to +28Vdc, 0.25% regulation, < 7A
DC Power Input	:	Filtered screw terminal

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



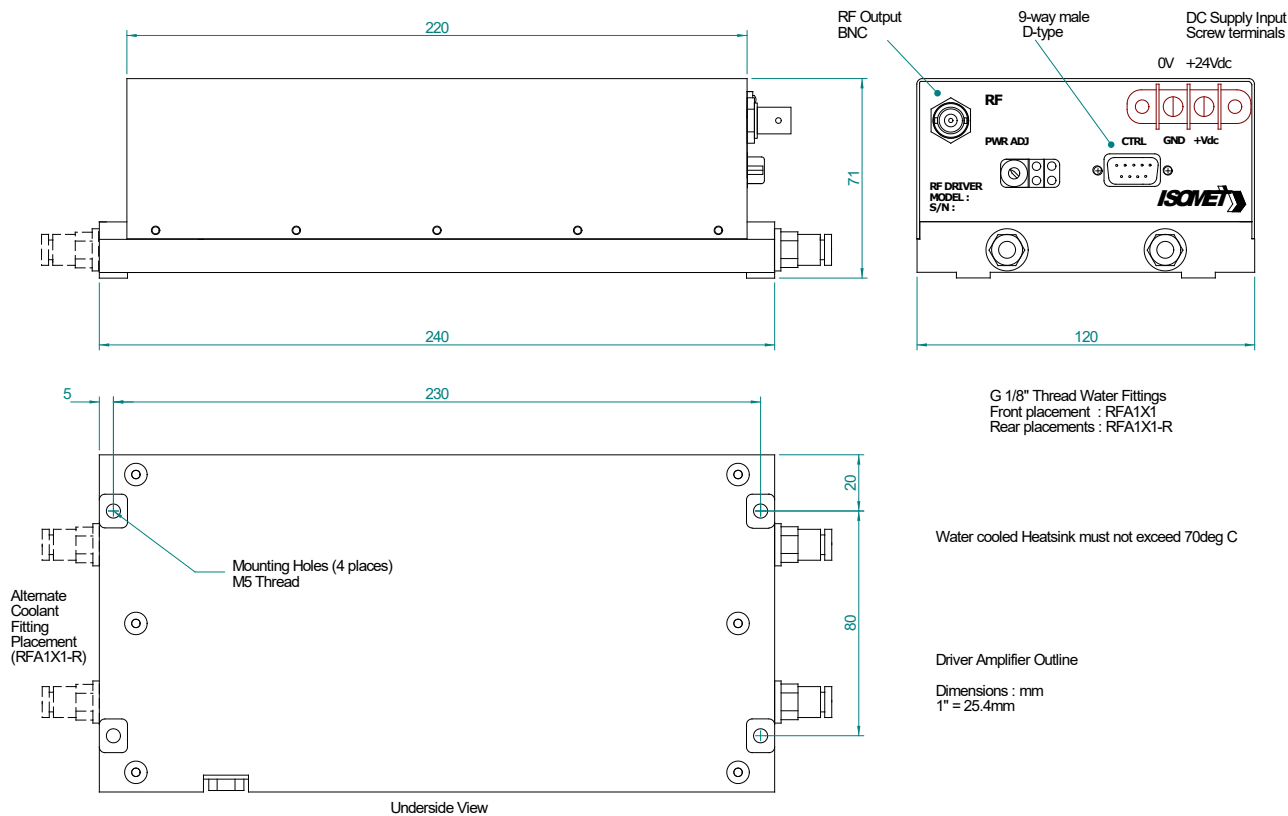
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### OUTLINE DRAWING



### OPTIONS

- A : Analog modulation only, no GATE input required
- D : Digital modulation only, no GATE input required
- BR: Brass heatsink, rear mounted water fittings only.  
(to suit brass or copper cased AO devices)
- R : Rear mounted water fitting
- 5V : 0 - 5V analog modulation range

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**Quality Assured.**  
**In-house: RF & Digital design**  
**Software Development**  
**OEM manufacture**