

# RFA251- RF Driver / Amplifier



0815

The RFA251 is a combined 50 MHz oscillator and power amplifier suitable for driving Isomet acousto-optic modulators such as model M1315-G50 (5um). This 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 (or RF enable) input is provided.

The RFA251 will operate from a +24V to +28Vdc supply. LED's indicate the status of the thermal interlocks, DC supply and the RF power activity. 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 (RFA251) or rear (RFA251 -R). See options table.

## SPECIFICATION

Power Output	:	70 Watts Max CW (28V supply) 60 Watts Max CW (24V supply)
Load Impedance	:	50Ω
Harmonic Distortion	:	>20dB below fundamental
Mismatch Tolerance	:	Driver will not oscillate
Centre Frequency	:	50.0 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	:	< 200/50 ns Rise/Fall, 0 to 50 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
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, 15V logic	:	+sig pn1, -rtn pn2 (+15V = OK, 0V = fault)
DC Power Input	:	Filtered screw terminal
Power Supply	:	+24V to +28Vdc, 1.0% regulation, < 4A

### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

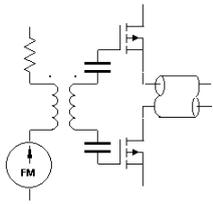
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### Quality Assured.

In-house: RF & Digital design  
Software Development  
OEM manufacture

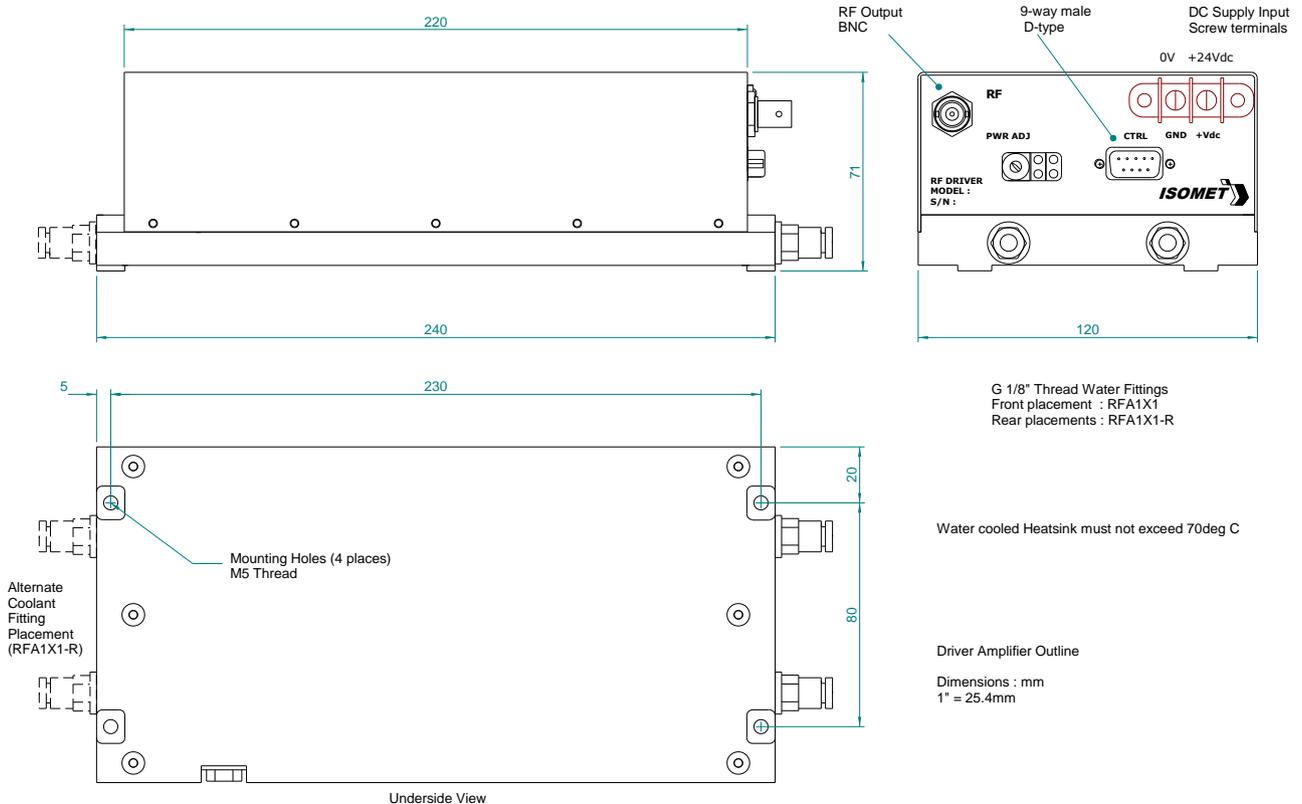


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## OUTLINE DRAWING



## OPTIONS

- A : Analog modulation only
- BR: Brass heatsink, rear mounted water fittings only.  
(to suit brass or copper cased AO devices)
- R : Rear mounted water fitting
- V : 0 - 5V analog modulation range

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