

# RFA4060-2K-x RF Driver/Amplifier



0115

The RFA4060-2K is a combined 40/60 MHz oscillator and power amplifier suitable for driving the Isomet High Power Acousto-optic Modulator/Deflector series AOM650. This driver features digital or analog inputs for the control of the RF amplitude and a digital input to select the carrier frequency. The drive frequency can be rapidly switched between 40 and 60MHz for dual spot applications. Protection includes an internal over temperature switch, and a 'TranZorb' over voltage diode on the DC supply input. An external interlock (or RF enable) input is provided. The amplifier includes an integral watercooled heatsink.

The RFA4060-2K will operate from a +24V to +28Vdc supply. An LED indicates when the RF outputs are 'live'. The maximum RF output power for each frequency can be adjusted independently by means of pre-set potentiometers.

### **SPECIFICATION**

Power Output > 190 Watts max CW (28V supply)

> 180 Watts max CW (24V supply)

Load Impedance

Harmonic Distortion >20dB below fundamental Mismatch Tolerance The Driver will not oscillate

Center Frequency 40MHz / 60MHz

Frequency Select TTL compatible, L=40MHz, H=60MHz

Frequency stability ± 25ppm Frequency accuracy ± 25ppm

Modulation Control Voltage

Digital TTL compatible (> 2.7V, RF O/P=on)

0.0 to 10.0V, 3Kohm i/p impedance (nominal) (option '-A') Analog

RF ON to OFF Ratio 40dB below full power

Output Switching Speed < 0.4 / 0.1 µs Rise/Fall, 0 to 70 Watts

Interlock Open OFF, closed ON

Sink 20mA at 12V

Power Supply +24V to +28Vdc, 0.25% regulation, < 16A Temperature Range 0° to 60°C, Thermal Shutdown Interlock

RF Output BNC (2 off)

Power Input Filtered screw terminal, 6/32 UNC

Control signals 15 pin 'D' type Male

Frequency select, TTL

: +sig pn8, -rtn pn15 (High=40MHz, Low=60MHz)

Amplitude control. TTL (or 0-10V if Option –A) : +sig pn7, -rtn pn14 (High=On, Low=Off) Interlock enable, (connect to AO) : +sig pn1, -rtn pn9 (Closed = on)

Interlock monitor, 5V CMOS open drain : +sig pn2, -rtn pn10 (Low = OK)

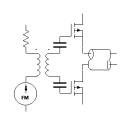
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Quality Assured. In-house: RF & Digital design **Software Development OEM** manufacture



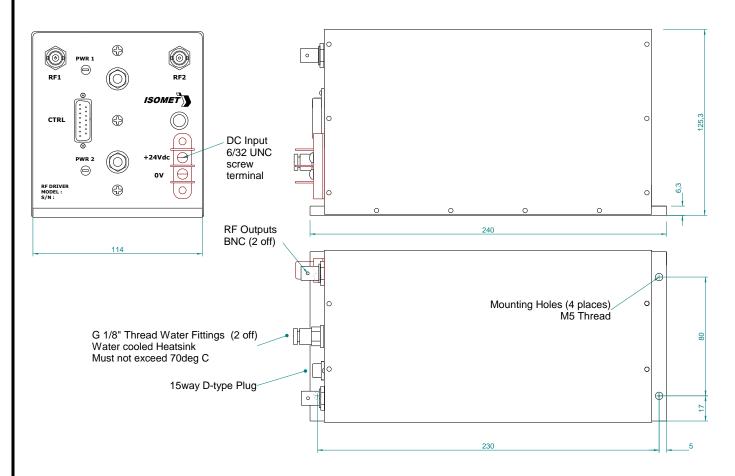
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## **OUTLINE DRAWING**

Dim's = mm



**Options –x**, multiple combinations possible:

- A : 0-10V analog modulation range

- BR : Brass water cooled heatsink (water fittings on RF output face)

Refer application note AN0901 regarding Coolant Specification

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