



RFA3050-2-60

Tuneable RF Driver

(Phase Delayed - Dual Output)



1021

The RFA3050-2 is a combined 40-60MHz VCO and power amplifier suitable for driving Isomet High Power Acousto-optic devices such as the D600-G50 series. The driver features a 0 to +10 volts input to tune the output frequency and a 0 to +10 volt analog modulation input signal to control the amplitude of the RF output. The driver has two 60 Watt RF outputs. Maximum gain is externally adjustable via a pre-set potentiometer. An internal delay line introduces the correct phasing between the RF outputs.

An external interlock (or RF enable) input is provided. The RFA will operate from a +24V to +28Vdc supply. LED's indicate when the RF outputs are 'live' and Interlocks enabled. The amplifier includes an integral water-cooled heatsink.

Preliminary SPECIFICATIONS

Oscillator Type:	Varactor-tuned thin film hybrid
Power Out, per output (RF1, RF2):	60 Watts Maximum CW into 50Ω
Phase delay between outputs:	AO Deflector dependant
Load VSWR:	< 2.5:1 for best results
Output RF Power Variation vs.Freq:	≤ 1 dB
Spurious Outputs:	Harmonics > 20dB below fundamental
Tuning Range:	40-60MHz
Tuning Voltage Input (Vt):	0 to 10V for specified tuning range
Tuning Linearity:	+/- 1.5% over specified tuning range
Tuning Voltage Impedance:	1Kohm (nominal)
Tuning Slew Rate	> 10 MHz/μs
Residual FM:	< 10 KHz peak-to-peak
Frequency Stability:	±0.25%
Amplitude Voltage Input (MOD):-	
Analogue:	0-10V for 100% depth of modulation, DC coupled
Input Impedance:	50Ω source
RF ON-OFF Ratio:	> 35 dB
Output Switching Speed:	< 0.25μs Rise/Fall, 0 to 50 Watts
Interlock:	Open OFF, closed ON Sink 20mA at 12V
Power Supply:	+24V to +28Vdc, 0.25% regulation, < 10A
Temperature Range:	0° to 60°C, Thermal Shutdown Interlock
RF Output:	BNC (2 off)

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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Quality Assured.

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



RFA3050-2-60

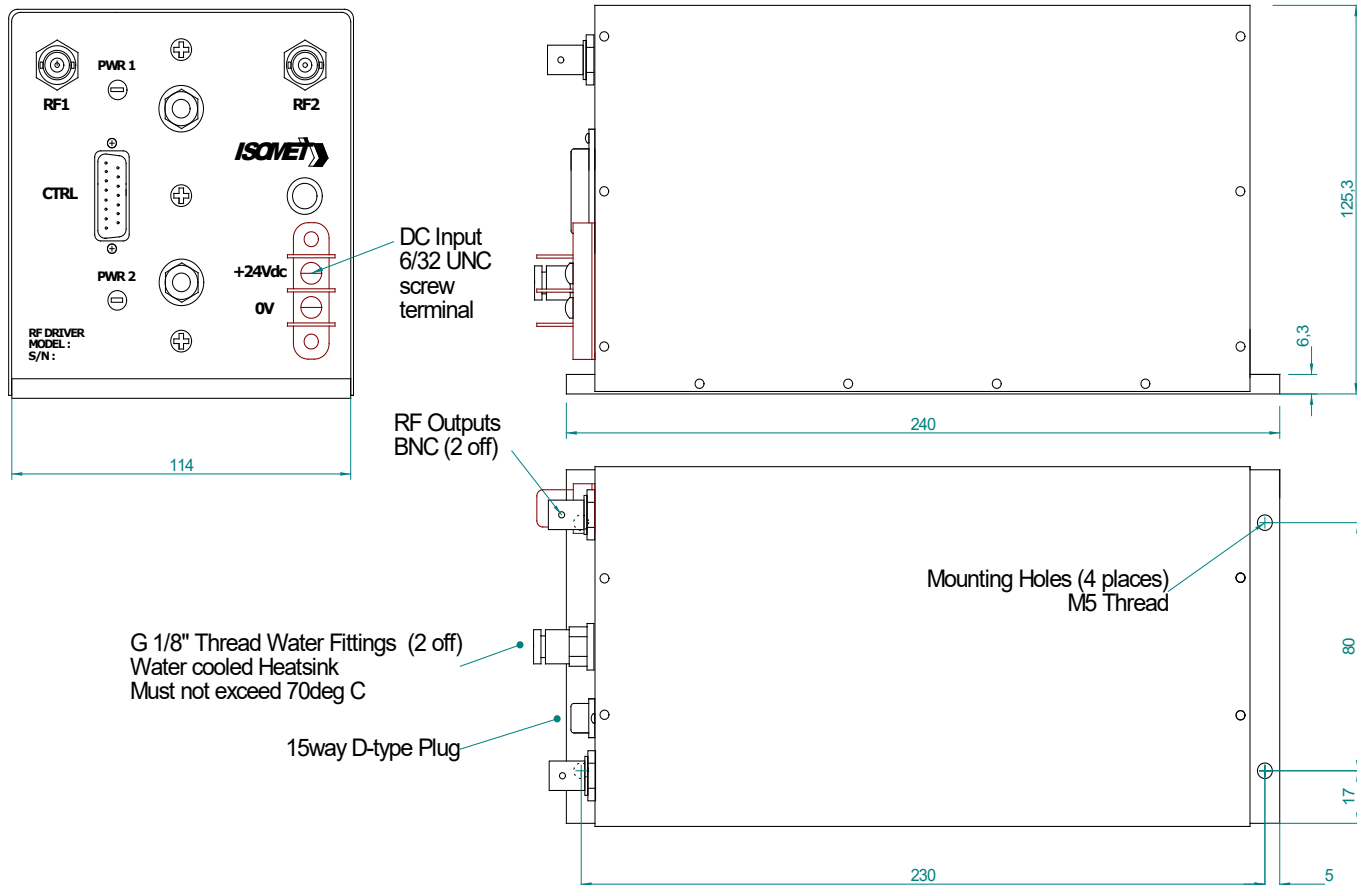
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OUTLINE DRAWING



Control signals	-	:	9 pin 'D' type
Tuning Voltage		:	+sig pn1, -rtn pn6
Amplitude Control		:	+sig pn8, -rtn pn3
Interlock Control (Contact / Low = On)		:	+sig pn9, -rtn pn4
Digital Gate (NC or High = On)		:	+sig pn7, -sig pn2

Options -x, multiple combinations possible:

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

Refer application note AN1906 regarding Coolant Specification

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