

RFA331-2

RF Driver / Amplifier (Phase Delayed – Dual Output)



0217

The Model RFA331-2 Deflector Driver is a ClassA solid-state RF source designed to drive *ISOMET* beam steered Acousto-Optic Scanners with up to 80.0 Watts total power across a 20 MHz minimum bandwidth in the frequency range of 30 to 50 MHz.

The driver control signals include 0 to +10 volt frequency tuning input and 0 to +10 volt amplitude modulation input. Each output delivers > 40 Watt RF. Maximum gain is externally adjustable via a pre-set potentiometer. The start frequency is also adjustable and is set by the frequency offset potentiometer (FOS). An internal delay line introduces the correct phasing between the RF outputs, specific to the AO deflector. The base plate is water cooled.

SPECIFICATION

Oscillator Type:	Varactor-tuned thin film hybrid
Power Output, total (X1 + X2):	> 40 Watts CW maximum 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:	30-50MHz (FOS defines)
Tuning Voltage (Vt):	0 to 10V for specified tuning range
Frequency Offset range (FOS):	+/- 10MHz minimum
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%
Video Input Voltage (MOD):-	
Analogue:	0-10V for 100% depth of modulation, DC coupled
Input Impedance:	600 ohm (nominal)
RF ON-OFF Ratio:	> 37 dB
RF Amplitude rise/fall time	< 200nsec
DC Power Input:	+24Vdc at 7A regulated to ± 0.25%
Temperature Range:	0°C to 50°C ambient, temperature at mounting face must not exceed 60°C. Water cooling available.
Power Input	: Filtered screw terminals

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

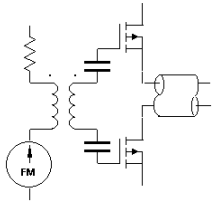
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Quality Assured.

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



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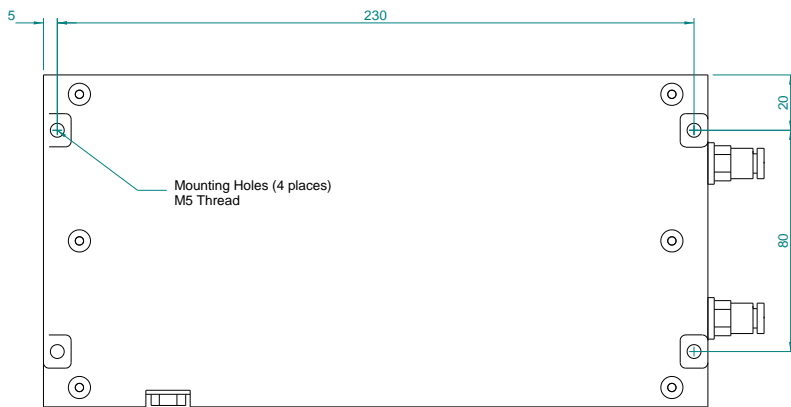
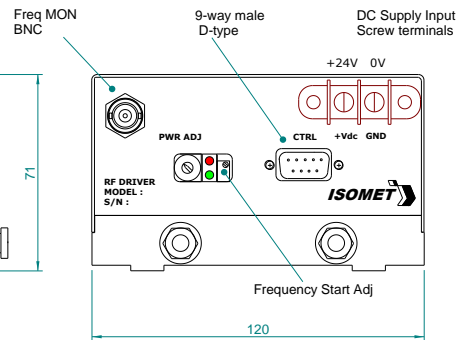
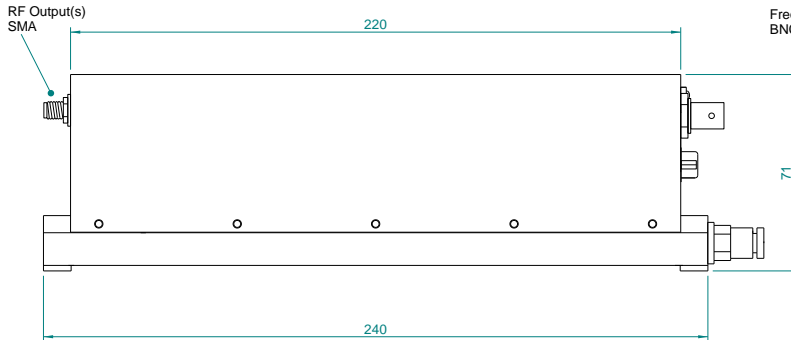
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OUTLINE DRAWING



Underside View

G 1/8" Thread Water Fittings
 Front placement : RFAXXX
 Rear placements : RFAXXX-R

Water cooled Heatsink must not exceed 50deg C

Driver Amplifier Outline

Dimensions : mm
 1" = 25.4mm

Control signals -	:	9 pin 'D' type
Tuning Voltage (0 -10V)	:	+sig pn1, -rtn pn6
Amplitude Control (0 – 10V)	:	+sig pn8, -rtn pn3
Enable/Interlock Control (Low = On)	:	+sig pn9, -rtn pn4
Digital Gate Input (NC or High = On)	:	+sig pn7, -sig pn2
Internal 10K ohm pull up to 12V	:	

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