

RFA3110-4

Tunable RF Driver

(Phase Delayed - Quad Output)



0115

The Model RFA3110-4 Deflector Driver is a class A solid-state RF source designed to drive *ISOMET* beam steered Acousto-Optic Scanners with up to 7.0 Watts total power across a frequency band of 85 to 145 MHz

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 four 1.8 Watt RF outputs. 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.

SPECIFICATIONS

Oscillator Type:	Varactor-tuned thin film hybrid
Power Out, Each Output (X1...X4):	1.8 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:	85-145MHz
Tuning Voltage (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%
Modulation 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	< 20nsec
DC Power Input:	+28Vdc* at 1.5A regulated to ± 0.25%
Temperature Range:	0°C to 60°C ambient. Temperature at the mounting face must not exceed 70°C.
Mounting Orientation:	Any

* A +24Vdc positive supply can be used giving a lower maximum RF power of 1.4W/output

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

Tel: (703) 321 8301 Fax: (703) 321 8546

E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

Quality Assured.

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



RFA3110-4

Tuneable RF Driver

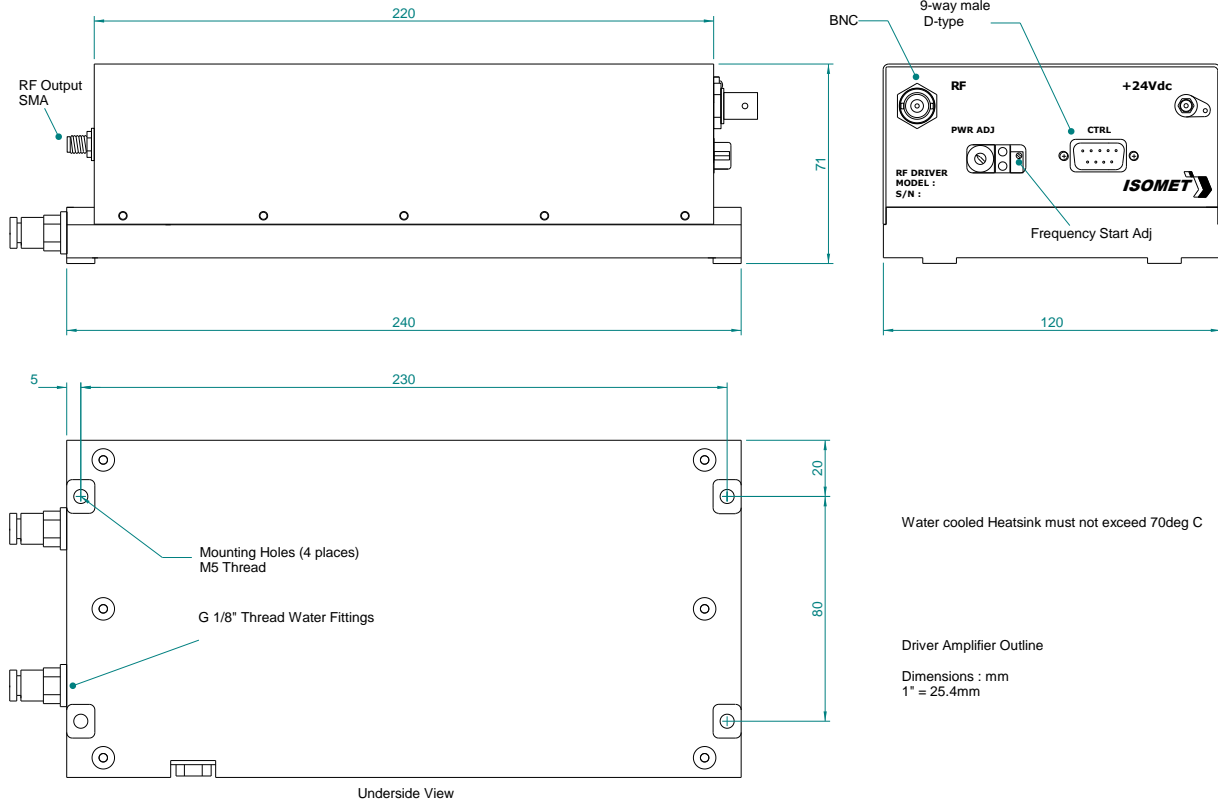
(Phase Delayed - Quad Output)



0115

OUTLINE DRAWING

Water cooled version



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)
- CC : Conduction cooled base

Refer application note AN0901 regarding Coolant Specification

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
 ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.
 Tel: (703) 321 8301 Fax: (703) 321 8546
 E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

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