

RFA3040-1-70

Tuneable RF Driver / Amplifier



0420

The RFA3040-1 is a combined VCO and power amplifier suitable for driving Isomet beam acousto-optic modulators such as models M1396-G40L-7. This driver features buffered inputs for the control of the RF amplitude and frequency. Protection includes an internal over temperature sensor and a 'Tranzorb' DC spike suppressor. An external interlock and RF Gate input are provided.

The RFA3040-1 will operate from a +24V to +28Vdc supply. An LED indicates when the RF output is 'live'. The maximum RF output power can be adjusted by means of a pre-set potentiometer.

SPECIFICATION

Power Output	:	75 Watts Max C.W.
Load Impedance	:	50Ω
Harmonic Distortion	:	>20dB below fundamental
Mismatch tolerance	:	Driver will not oscillate
Tuning range	:	30-50MHz
Flatness	:	+/-1dB across tuning range
Tuning characteristics	:	Linear frequency vs. tuning voltage Linear +/- 1% over range
Tuning Voltage	:	0V to 10V
Tuning Voltage I/P Impedance	:	1KΩ nominal, (< 5mA)
Tuning Slew Rate	:	>10MHz/μs
Residual FM	:	<10KHz Peak to Peak
Frequency Stability	:	+/- 0.25% From 0° to 60°C
Modulation Control Voltage	:	0.5V to 5V (<0.5V RF O/P off)
Mod'n Control Characteristics	:	Pseudo linear RF Output vs.voltage
Mod'n Control I/P Impedance	:	600 Ω nominal. (< 15mA)
Gate I/P Volts	:	0V off, +12V or not connected = On
Gate I/P Impedance	:	> 10KΩ
Gate Cont. Characteristics	:	< 10ms settling time, solid state control
Interlock I/P	:	Make contact = On, Not connected = Off
Interlock I/P Impedance	:	> 10KΩ
RF ON to OFF Ratio	:	40dB below full power
Modulation Output switching Speed	:	< 0.3μs/0.1μs rise/fall, 0 to 50 Watts
Power Supply	:	+24 to 28Vdc, Fused, Tranzorb protected
Temperature Range	:	0° to 50°C, Thermal Shutdown Interlock

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

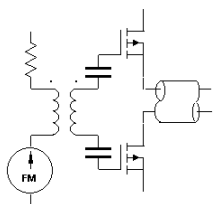
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Quality Assured.

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



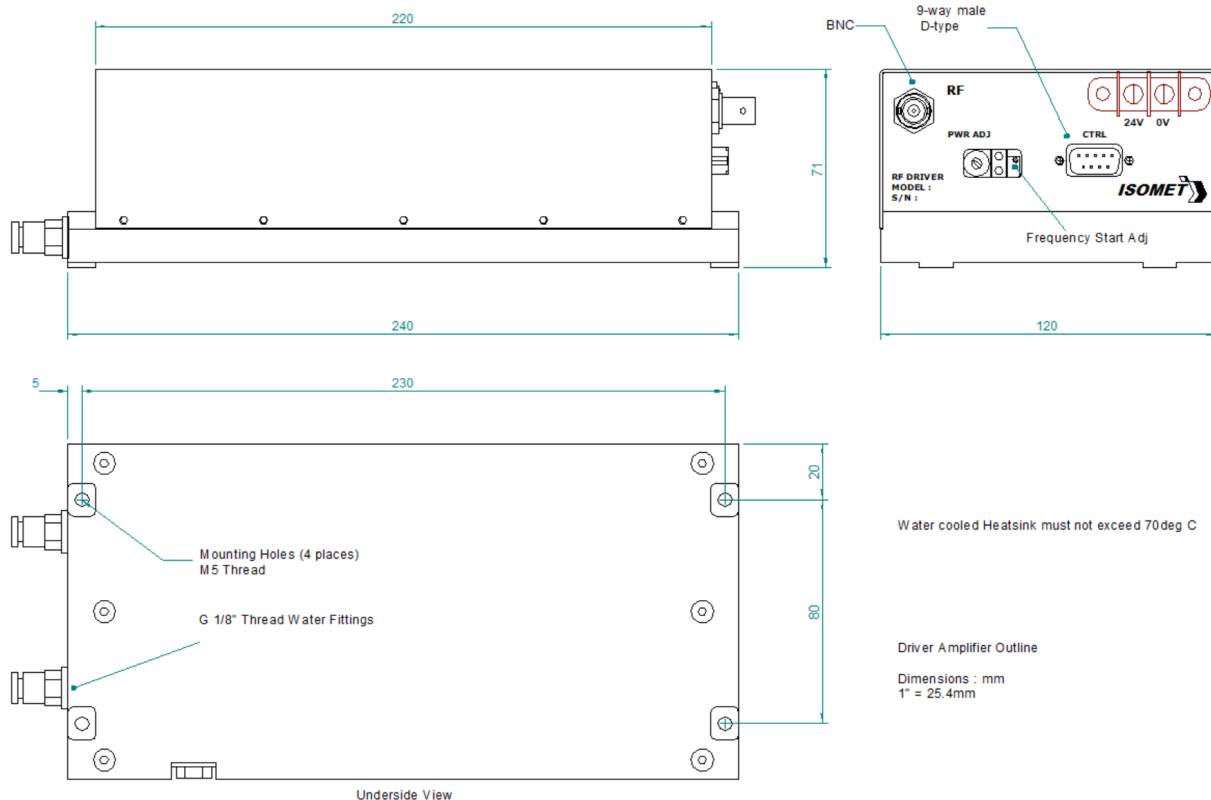
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OUTLINE DRAWING



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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