

RA2(3)(5)-z-13-1-50 RF Driver / Amplifier



0124

The RAX-13-1-50 is a combined 13.56MHz oscillator and power amplifier suitable for driving Raman-Nath AO devices. The -BR option is recommended for brass and copper cased acousto-optic modulators. The standard configuration features both digital gate and analog modulation inputs for the control of the RF amplitude. Protection includes an internal over-temperature sensor, and a 'Tranzorb' over-voltage diode on the DC supply input. An external interlock input is provided for connection to the AO device thermal interlock sensor.

Active modulation	Model	Modulation Input
Digital only	RA2-	5V logic compatible
Analog only	RA3-	0 - 10V *
Dual	RA5-	both, as above

This driver will operate from a +24V to +28Vdc supply. LEDs indicate the status of the thermal interlocks, DC supply and the RF power activity. The RF output power limit is adjusted by means of a pre-set potentiometer.

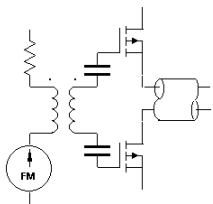
SPECIFICATION

Power Output (BNC)	:	>60 Watts Max. CW (28V supply) >50 Watts Max. CW (24V supply)	
Load Impedance	:	50Ω	
Harmonic Distortion	:	>25dB below fundamental	
Mismatch Tolerance	:	Driver will not oscillate.	
Centre Frequency	:	13.56MHz	
Frequency stability	:	± 25ppm	
Frequency accuracy	:	± 25ppm	
Control Signals			
RA2- and RA5-	Digital Mod'n	:	TTL compatible (>2.7V, RF active. <2.2V = Off)
RA3- and RA5-	Analog Mod'n	:	0.0 to 10.0V, ~1Kohm i/p impedance*
All models	GATE (Optional)	:	TTL compatible (NC or <0.8V =ON, >2.2V = Off)
RF ON to OFF Ratio	:	40dB below full power	
Output Switching Speed	:	< 200ns rise / < 50ns fall, 0 to 50 Watts	
Interlock (Binder-719 push connector)	:	Open OFF, closed ON (Sink 20mA at Vdc)	
Temperature Range	:	0° to 50°C, Thermal Shutdown Interlock	
Control signals	-	9 pin 'D' type Male	
	Digital Mod	:	IN +sig pn6, -rtn pn7
	Analog Modulation	:	IN +sig pn8, -rtn pn9
	-INT-MON: (0V = OK)	:	OUT +sig pn1, -rtn pn2
	RF Gate	:	IN + sig pn4, -rtn pn7
	Reserved	:	DNC pn3
	Reset HRP fault	:	IN +sig pn5, -rtn pn9
			(Momentary no voltage contact pn5 to pn9 to reset)
DC Power Input	:	Filtered screw terminal	
Power Supply, Vdc	:	+24V to +28Vdc, 1.0% regulation, <7A	

* Other options available 0-1V (-Y), 0-5V (-V)

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

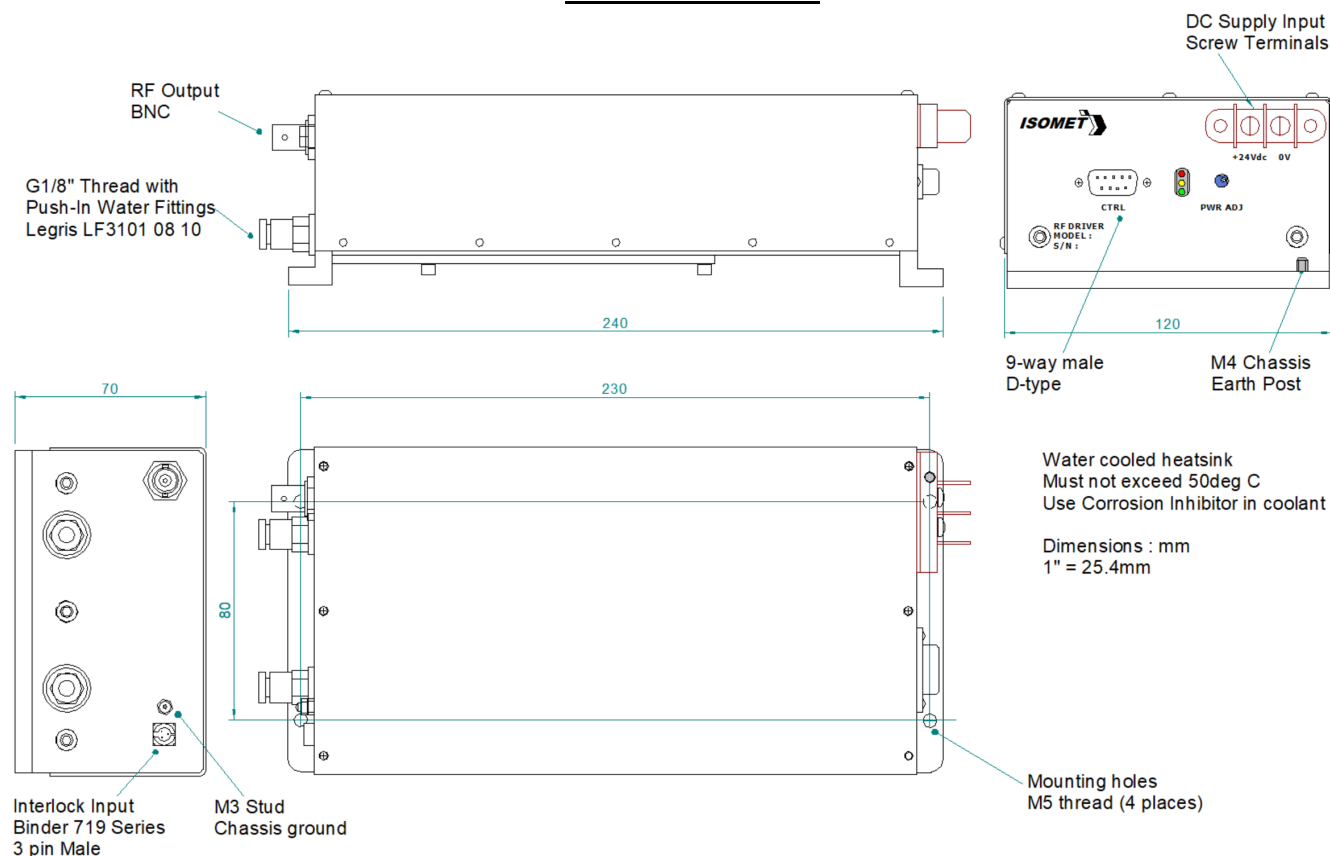


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OUTLINE DRAWING



Options -z, multiple combinations possible:

- BR : integral brass water-cooled heatsink (e.g. RA5-BR-13-1-50 shown above)
- Y : 0-1V analog modulation range
- V : 0-5V analog modulation range
- L : active low gate (no connection = RF disabled)

Refer application note AN1906 regarding Coolant Specification

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