

# RFA450-2-x

## RF Driver/Amplifier



3120

The RFA450-2-x is a combined 50 MHz oscillator and power amplifier suitable for driving Isomet High Power Acousto-optic modulators such as the D1378-G50 series. This driver features a fast modulation input that is factory configured for digital (On:Off) or analog (proportional) control of the RF amplitude plus a secondary digital RF gate input. Protection includes an internal over temperature sensor, and a 'TranZorb' over voltage diode on the DC supply. An external interlock (or enable) input is provided. The amplifier includes an integral water-cooled heatsink. Available options (-x) are listed below.

The RFA450-2 will operate from a +24V to +28Vdc supply. An LED indicates when the RF outputs are 'live'. The maximum RF output power is set by a front panel single turn potentiometer

### SPECIFICATION

Power Output (total)	:	> 240 Watts Max. CW (28V supply) > 200 Watts Max. CW (24V supply)
Load Impedance	:	50Ω
Harmonic Distortion	:	>20dB below fundamental
Mismatch Tolerance	:	The Driver will not oscillate
Center Frequency	:	50 MHz
Frequency stability	:	± 25ppm
Frequency accuracy	:	± 25ppm
Modulation Control Voltage	:	
Digital (-D)	:	TTL compatible (> 2.7V, RF O/P=ON)
Analog	:	0.0 to 10.0V, 1kohm i/p impedance (nominal)
RF ON to OFF Ratio	:	40dB below full power
Output Switching Speed	:	< 0.25μs Rise/Fall, 0 to 100W per output
Interlock	:	Open OFF, closed ON, Sink 20mA at 24V
Power Supply	:	+24V to +28Vdc, 0.25% regulation, 18A
Temperature Range	:	0° to 60°C, Thermal Shutdown Interlock Water cooled.
RF Output	:	BNC (2 off)
Control signals -	:	15 pin 'D' type Male
RF Gate, Digital	:	+sig p8, -rtn p15 (TTL level compatible)
Amplitude Modulation Control	:	+sig p7, -rtn p14
Interlock enable (connect to AO) :	:	+sig p1, -rtn p9 (closed = on)
Driver Enabled monitor, open collector	:	+sig p2, -sig p10 (low = OK)
Power Input	:	Filtered screw terminal

#### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

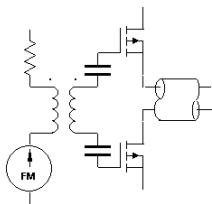
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#### Quality Assured.

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



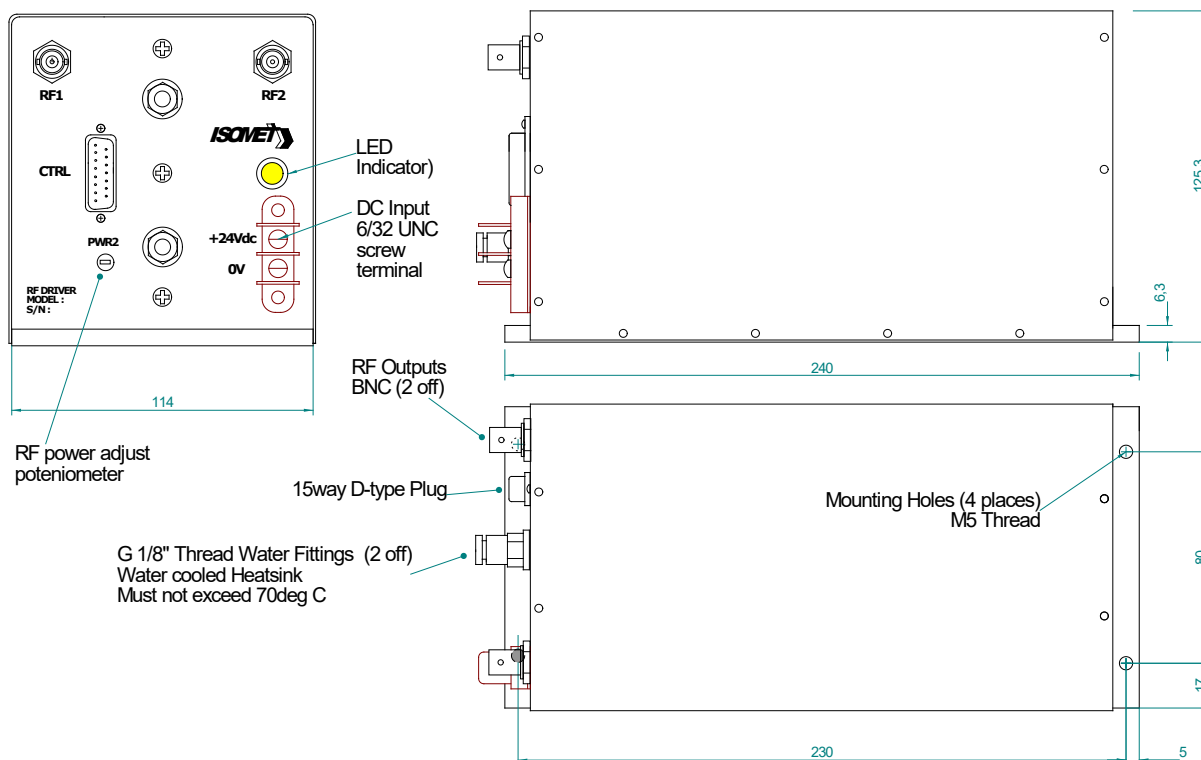
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### OUTLINE DRAWING



**Options -x**, multiple combinations possible:

- V : 0-5V analog modulation range
- L : RF gate input not necessary
- D : digital modulation, fast input
- BR : Brass water cooled heatsink

**Refer app note AN1606 regarding Coolant Specification**

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