

RFA250-2-x

RF Driver/Amplifier



1120

The RFA250-2-x is a combined 50 MHz oscillator and power amplifier suitable for driving Isomet High Power Acousto-optic modulators such as the AOM640-x 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 RFA240-2 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) | : | > 160 Watts Max. CW (28V supply) > 140 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 50W per output |
| Interlock | : | Open OFF, closed ON, Sink 20mA at 24V |
| Power Supply | : | +24V to +28Vdc, 0.25% regulation, < 14A |
| Temperature Range | : | 0° to 60°C, Thermal Shutdown Interlock |
| 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 pn1, -rtn pn9 (closed = on) |
| Driver Enabled monitor, open collector | : | +sig p2, -sig p10 (low = OK) |
| Power Input | : | Filtered screw terminal |
| Dimensions | : | (See reverse) |

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ISOMET CORP, 10342 Battleview Parkway, Manassas, VA 20109, USA.

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

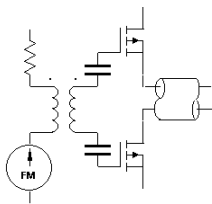
E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

Quality Assured.

In-house: RF & Digital design

Software Development

OEM manufacture



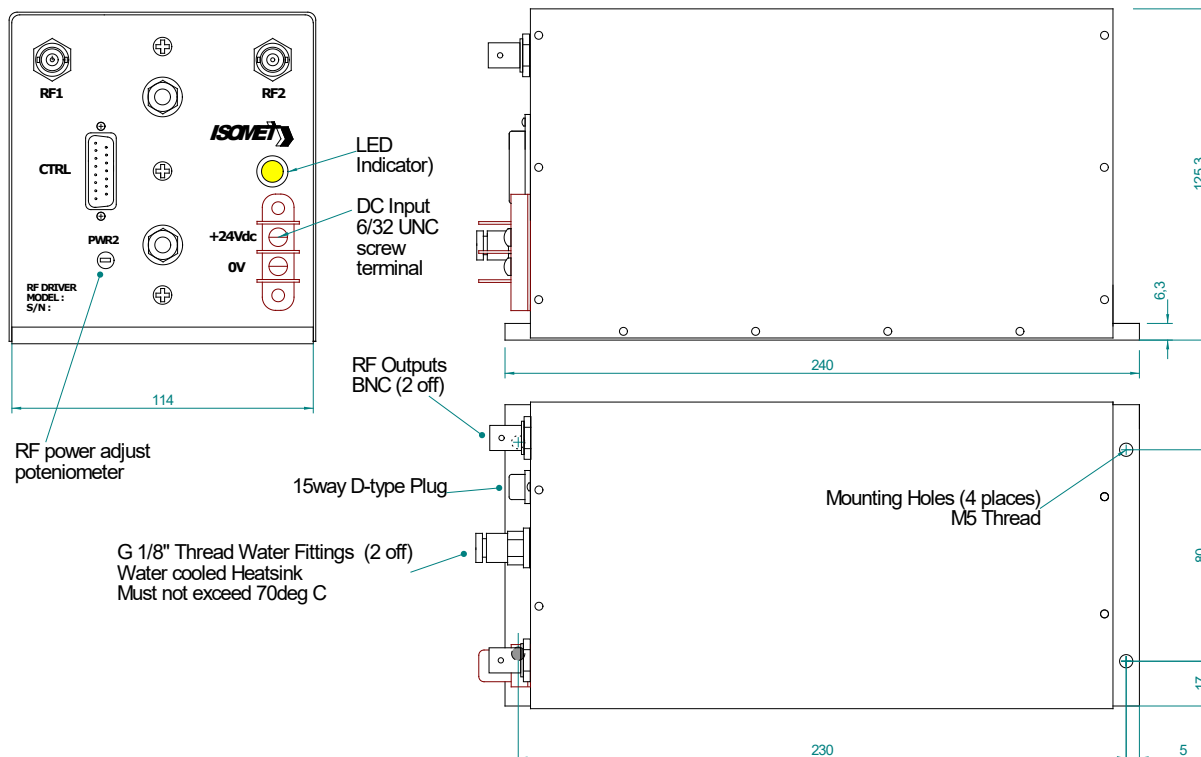
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OUTLINE DRAWING



Options -x, multiple combinations possible:

- V : 0-5V analog modulation range
- L : RF gate input not necessary
- D : digital modulation, fast input
- Mxx : Max power limited to xx Watts
- BR : Brass water cooled heatsink

Refer app note AN1606 regarding Coolant Specification

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