

## RFA050-4-40 Quad RF Amplifier



3121

The RFA050-4-40 contains four independent class-A solid-state RF amplifiers and is designed to operate with *ISOMET* IMS4 quad-output frequency synthesizers. Each output will deliver in excess of 35 Watts power across a frequency bandwidth of 35 to 65 MHz

Each channel requires 0dBm (1mW) RF input. There is no gain adjustment. The RF power, amplitude modulation and phase are determined by the input source. Diagnostics are also provided. This is compatible with IMS4 synthesizer amplifier interface and includes forward/reflected RF power (relative readings), DC current and temperature. Protection includes over-temperature, reverse DC voltage connection.

### SPECIFICATIONS

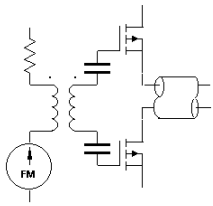
|                                      |   |
|--------------------------------------|---|
| Power Out, each output:              | 35 Watts minimum CW into 50 $\Omega$  |
| Load VSWR:                           | < 2.5:1 for best results  |
| Output RF power variation vs. freq': | $\leq$ 1 dB over specified bandwidth  |
| Spurious output:                     | Harmonics > 20dB below fundamental  |
| 3dB Bandwidth                        | 35-65MHz minimum  |
| RF input:                            | 3dBm max  |
| Gain:                                | ~40dB   |
| Input impedance:                     | 50 ohm (nominal)  |
| RF amplitude rise/fall time          | < 200/50nsec typical (input dependent)  |
| DC power input:                      | +24V to 28Vdc* at <14A regulated to $\pm$ 0.25%   |
| Temperature range:                   | 0 $^{\circ}$ C to 50 $^{\circ}$ C ambient temperature.<br>Integrated water cooled heatsink.<br>Mounting face must not exceed 70 $^{\circ}$ C. |

**Refer application note AN1906 regarding coolant specification**

\* +28Vdc supply will give increased maximum RF power

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**  
ISOMET CORP, 10342 Battlevue Parkway, Manassas, VA 20109, USA.  
Tel: (703) 321 8301 Fax: (703) 321 8546  
E-mail: [ISOMET@ISOMET.COM](mailto:ISOMET@ISOMET.COM) Web Page: [WWW.ISOMET.COM](http://WWW.ISOMET.COM)

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



# RFA050-4-40

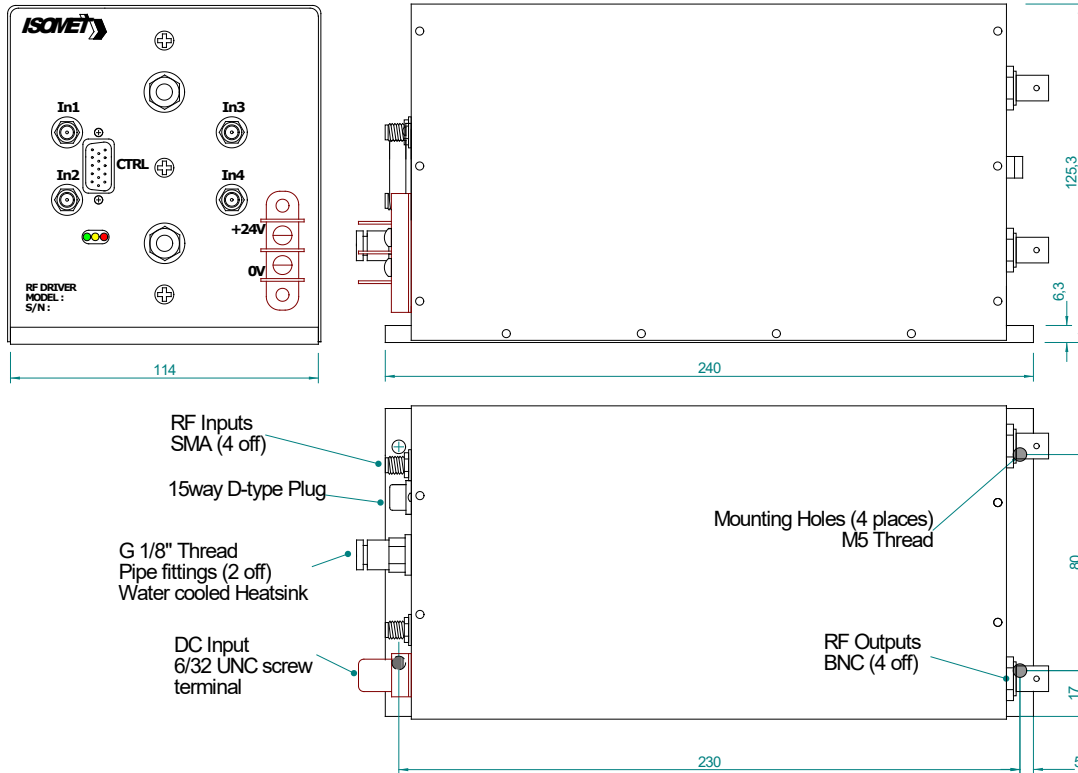
## Quad RF Amplifier



3121

### OUTLINE DRAWING

Dim'n mm



Control signals on 15 pin high density 'D' type (compatible with iMS4-x J5 output) :

| pin | signal   | pin | signal                      | pin | signal                |
|-----|----------|-----|-----------------------------|-----|-----------------------|
| 1   | +5V OUT  | 6   | reserved                    | 11  | reserved              |
| 2   | reserved | 7   | 0V                          | 12  | Interlock Monitor OUT |
| 3   | reserved | 8   | reserved                    | 13  | reserved              |
| 4   | 0V OUT   | 9   | Amplifier Enable (-Gate) IN | 14  | reserved              |
| 5   | reserved | 10  | +5V out                     | 15  | reserved              |

DO NOT connect to reserved pins

#### Options -x:

- BR : Brass water cooled heatsink (water fittings on RF output face)

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**  
 ISOMET CORP, 10342 Battlevue Parkway, Manassas, VA 20109, USA.  
 Tel: (703) 321 8301 Fax: (703) 321 8546  
 E-mail: [ISOMET@ISOMET.COM](mailto:ISOMET@ISOMET.COM) Web Page: [WWW.ISOMET.COM](http://WWW.ISOMET.COM)

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