

iSA25x-4

RF Synthesizer/Amplifier



0912

The iSA25x-4 are programmable frequency synthesizer and power amplifiers with four phase controlled outputs. They are ideally suited for driving the Isomet DBM1186 and 1199 Dual Beam Acousto-optic Modulators. This driver includes a micro-controller and high speed multi-output synthesizer. Initial set-up and diagnostics are made via a USB interface. Once programmed, operation is from non-volatile memory and the outputs are controlled from dedicated external inputs.

Digital inputs select the required +1st or -1st modulator output beam by switching the relative phase of the driver outputs. The power level for each AOM output can be set either by two external independent analog input signals or internal digital pots. A separate digital gate input provides global On:Off control.

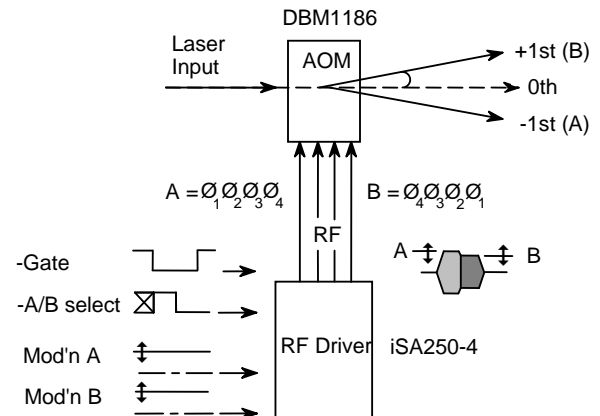
Diagnostics include:

- RF power level indication
- AOM and driver temperature
- DC supply voltage and current

Protection includes:

- Over temperature shut down
- DC supply over-voltage clamp
- External thermal interlock.

The iSA25x-4 will operate from a +24V to +28Vdc supply. LED's indicate the status of the thermal interlocks, DC supply and RF output activity.



SPECIFICATION

Maximum RF Power Output (Total)	:	> 200 Watts CW (28V supply) > 180 Watts CW (24V supply)
Load Impedance	:	50Ω
RF Outputs	:	BNC (4 off)
Harmonic Distortion	:	>20dB below fundamental
Center Frequency (wavelength specific)	:	50.9 MHz (x=1) or 54.0 MHz (x=4)
Frequency stability	:	± 0.003%
Frequency accuracy	:	± 0.005%
Analog Modulation Control	:	0.0V OFF to 10.0V fully ON
-Gate Control	:	TTL Compatible (0<V< 3v3)
-A/B Select	:	TTL Compatible (0<V< 3v3)
RF ON to OFF Ratio	:	>37dB below full power
Output Switching Speed	:	< 0.25μs Rise/Fall, 0 to 50 Watts per output
Power Supply	:	+24V to +28Vdc, 0.25% regulation, < 20A
Power Input	:	Feed through filter solder tag
Temperature Range	:	0° to 60°C, Thermal Shutdown Interlock Integral water-cooled heatsink

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

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

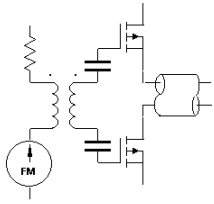
E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

Quality Assured.

In-house: RF & Digital design

Software Development

OEM manufacture



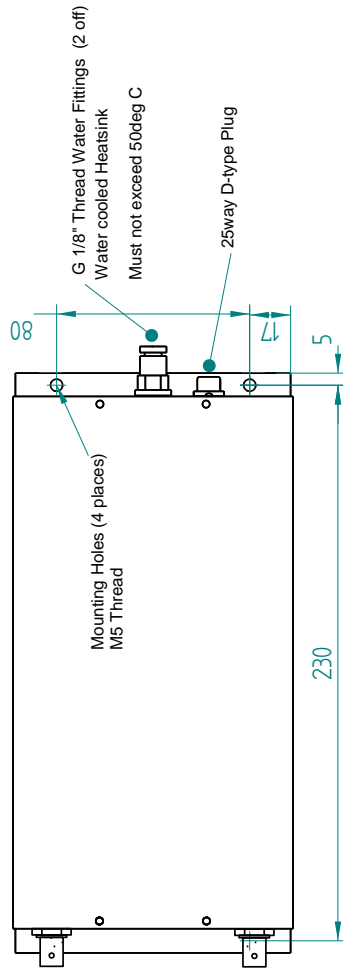
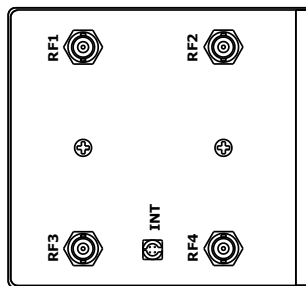
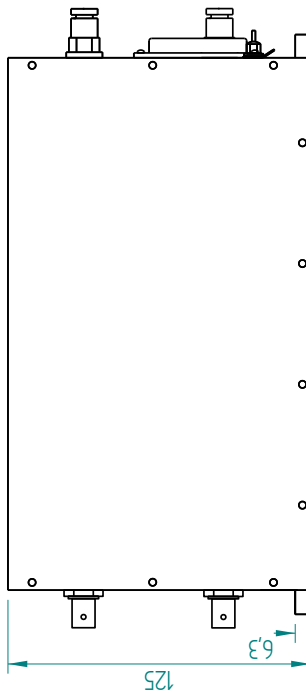
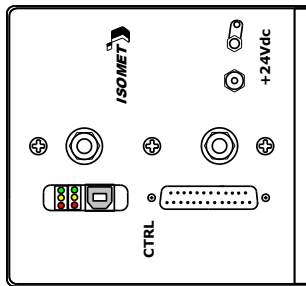
iSA25x-4

RF Synthesizer/Amplifier



0912

OUTLINE DRAWING



RF Outputs
BNC (4 off)
INT Input
4 way Plug
(Binder 719)

RF Amplifier Outline
Dimensions : mm
1" = 25.4mm

Control signals 25 pin 'D' type Male

Function		Sig Pin	Rtn Pin
-A/B Select (P0)	In	1	14
Reserved		2	15
Reserved		3	16
Reserved		4	17
Mod'n level B	In	5	18
Mod'n level A	In	6	19
-Gate On:Off (-OHL)	In	7	20
STATUS	Out	8	21
Phase select input D3		9	22
Phase select input D2		10	23
Phase select input D1		11	24
Reserved		12	25
- RESET	In	13	25

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, 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