

iSA240-4

RF Synthesizer/Amplifier (PRELIMINARY DATA)



1109

The iSA240-2 is a programmable frequency synthesizer and power amplifier with four phase controlled outputs. It is ideally suited for driving the Isomet Dual Beam Acousto-optic Modulator DBM-G40-H. 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.

The A/B digital input selects the required +1st or -1st modulator output beam by switching the relative phase of the driver outputs. Two independent analog modulation input signals control the power level for each AOM output. A separate digital gate input provides global On:Off control.

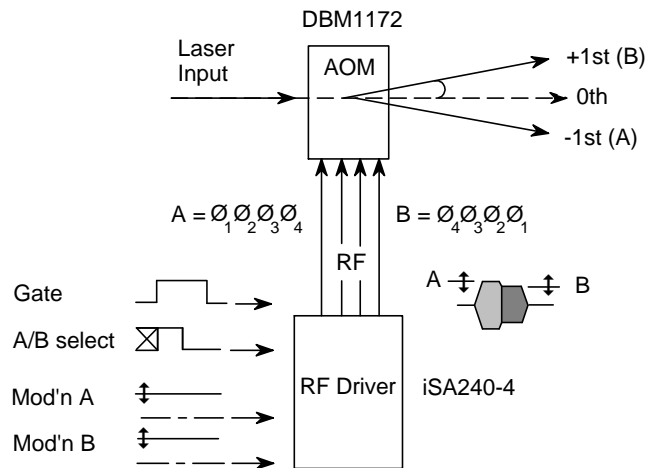
Diagnostics include:

- 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.

Maximum RF output power is set by means of a single potentiometer. The iSA240-4 will operate from a +24V to +28Vdc supply. LED's indicate the status of the thermal interlocks, DC supply and RF output activity.



SPECIFICATION

Power Output (Total)	:	> 130 Watts Max CW (28V supply) > 110 Watts Max. CW (24V supply)
Load Impedance	:	50Ω
RF Outputs	:	BNC (4 off)
Harmonic Distortion	:	>20dB below fundamental
Center Frequency	:	40 MHz (others available)
Frequency stability	:	± 0.003%
Frequency accuracy	:	± 0.005%
	:	
Analog Modulation Control	:	0.0V OFF to 10.0V fully ON
Gate Control	:	TTL Compatible (> 2.7V = RF On)
A/B Select	:	TTL Compatible
RF ON to OFF Ratio	:	37dB below full power
Output Switching Speed	:	< 0.25μs Rise/Fall, 0 to 30 Watts per output
	:	
Power Supply	:	+24V to +28Vdc, 0.25% regulation, < 12A
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

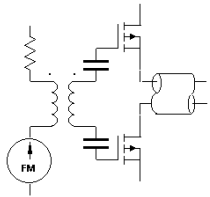
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Quality Assured.

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



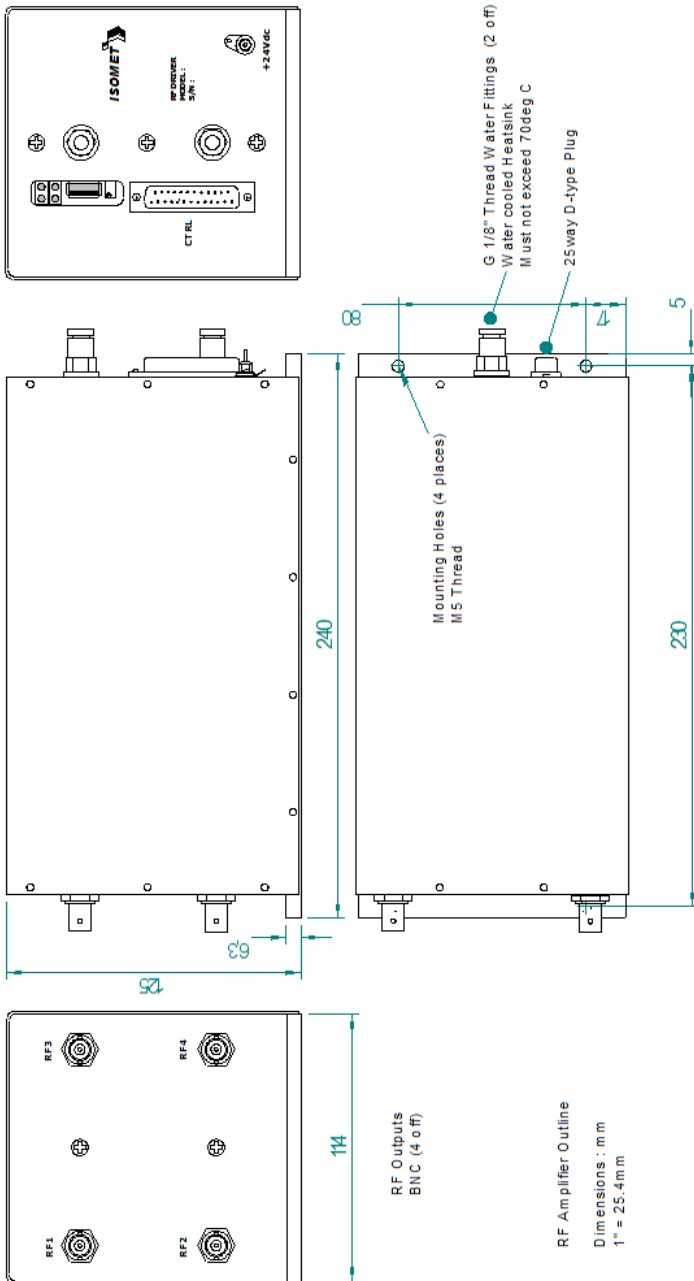
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OUTLINE DRAWING



Control signals 25 pin 'D' type Male

Function		Sig Pin	Rtn Pin
AO Temp Sensor Feed	Out	1	14
AO Temp Sensor Input	In	2	15
Reserved		3	16
Reserved		4	17
Reserved		5	18
A/B Select	In	6	19
Mod'n level B	In	7	20
Mod'n level A	In	8	21
Gate On:Off	In	9	22
RF 4 power level	Out	10	23
RF 3 power level	Out	11	24
RF 2 power level	Out	12	25
RF 1 power level	Out	13	25

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