

# RFA441

## RF Driver / Amplifier



0419

The RFA441 is a combined 40 MHz oscillator and power amplifier suitable for driving larger aperture Germanium acousto-optic modulators such as the 1209-9-1010. This driver features both digital gate and analog modulation inputs for the control of the RF amplitude. Protection includes an internal over temperature sensor, and a 'Tranzorb' over-voltage diode on the DC supply input. An external interlock (or RF enable) input is provided.

The RFA441 will operate from a +24V to +28Vdc supply. LED's indicate the status of the thermal interlocks, DC supply and RF power output. The RF output power limit is adjusted by means of a pre-set potentiometer.

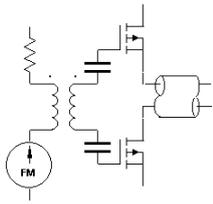
The amplifier includes an integral water cooled base. The unit can be supplied with the coolant fittings located at the front (RFA441) or rear (RFA441-R). See options.

### SPECIFICATION

Power Output	:	> 110 Watts Max CW (28V supply) > 90 Watts Max. CW (24V supply)
Load Impedance	:	50Ω
Harmonic Distortion	:	>20dB below fundamental
Mismatch Tolerance	:	Driver will not oscillate
Centre Frequency	:	40.0 MHz
Frequency stability	:	± 25ppm
Frequency accuracy	:	± 25ppm
Modulation Control Voltage	:	
Digital	:	TTL compatible (> 2.7V, RF active)
Analog	:	0.0 to 10.0V, 3Kohm i/p impedance (nominal)
RF ON to OFF Ratio	:	> 37dB
Output Switching Speed	:	< 400ns rise / < 100ns fall, 0 to 80 Watts
Interlock	:	Open OFF, closed ON Sink 20mA at Vdc
Temperature Range	:	0° to 50°C, Thermal Shutdown Interlock
Control signals -	:	9 pin 'D' type
Amplitude Control, Digital	:	+sig pn6, -rtn pn7
Amplitude Control, Analog	:	+sig pn8, -rtn pn9
Interlock enable (connect to AO)	:	+sig pn4, -rtn pn5 (closed = on)
Interlock monitor, 15V logic	:	+sig pn1, -rtn pn2 (+15V = OK, 0V = fault)
DC Power Input	:	Feed through filter solder tag
Power Supply, Vdc	:	+24V to +28Vdc, 0.25% regulation, < 8A

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**  
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**Quality Assured.**  
**In-house: RF & Digital design**  
**Software Development**  
**OEM manufacture**



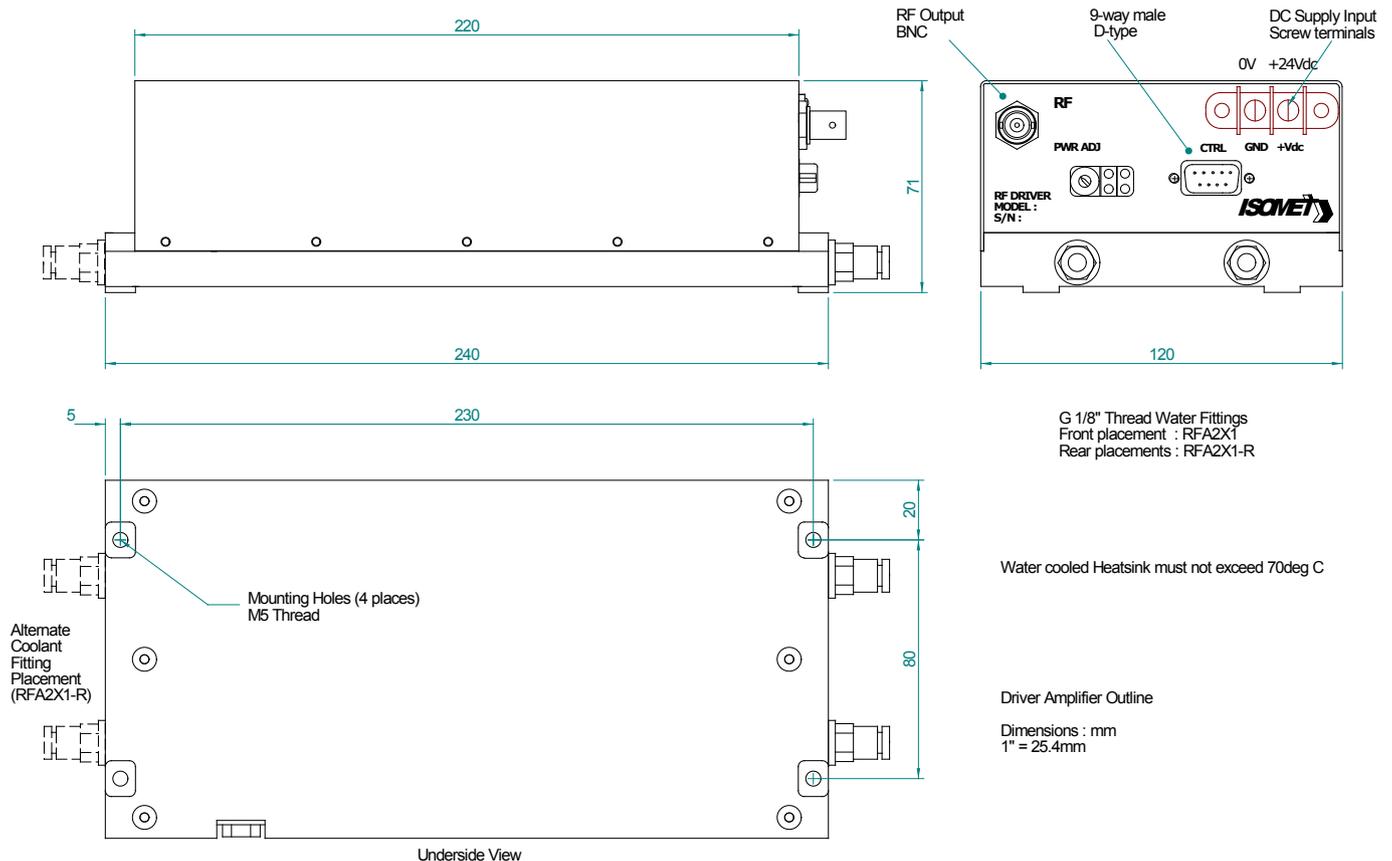
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### OUTLINE DRAWING



### OPTIONS

- A : Analog modulation only
- BR: Brass heatsink, rear mounted water fittings only.  
(to suit brass or copper cased AO devices)
- R : Rear mounted water fitting
- V : 0 - 5V analog modulation range

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