

RFA641-x

RF Driver/Amplifier



0418

The RFA641-x is a combined 40 MHz oscillator and power amplifier suitable for driving Isomet High Power Acousto-optic modulators such as the AOM740 and M1315 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, 'TranZorb' over voltage diode on the DC supply input and high VSWR shutdown. An external interlock (or enable) input is provided. The amplifier includes an integral water-cooled heatsink. Available options (-x) are listed below.

The RFA641 operates from a +24V supply. An LED indicates when the RF outputs are 'live'. The maximum RF output power is set by one of two methods as selected by the user. a) Manual adjustment using front panel potentiometer b) Demonstrate adjustment using e^{-2} comparison by the second secon

b) Remote adjustment via a buffered I²C compatible serial interface.

SPECIFICATION

	Power Output Load Impedance Harmonic Distortion Mismatch Tolerance		:	> 180 Watts Max. CW	
			:	50Ω >20dB below fundamental Driver will not oscillate	
	Center Frequency Frequency stability Frequency accuracy		: :	40.0 MHz ± 25ppm ± 25ppm	
	- or - - or -	Analog (RFA641) - or - Digital (RFA641-D) - or - Dual mod (RFA641-DA)	:	0.0 to 10.0V, 3kohm i/p impedance (nominal) TTL compatible (> 2.7V, RF active) Both 0.0 to 10.0V and TTL, as above.	
	RF ON to OFF R Output Switching	atio J Speed	:	40dB below full power < 500/100ns Rise/Fall, 0 to 150 Watts	
	Interlock Temperature Range Interlock enable		:	Open OFF, closed ON, Sink 20mA at 15V	
			:	0º to 50ºC, Thermal Shutdown Interlock	
			:	Binder 719, 3-pin (connect to AO)	
	Control signals RF Gate, PLC Alternate TTL I Serial interface Serial interface 0-10V Analog I RF monitor, op Interlock monit Remote/Manua	logic (5v <v<24v =="" on)<br="">Vodulation input (Option – 2 Data IO 2 Clock Vodulation (or TTL if option to-open collector or, opto-open collector al Power Adjust Select (no connect = manual)</v<24v>	- DA) n – D)	15 pin 'D' type Male : IN +sig pn8, -rtn pn15 : IN +sig pn7, -rtn pn14 : IN +sig pn6, -rtn pn13 (I^2C compatible) : IN +sig pn5, -rtn pn13 (I^2C compatible) : IN +sig pn7, -rtn pn14 : OUT +sig pn3, -sig pn10 (low = OK) : OUT +sig pn2, -sig pn10 (low = OK) : IN +sig pn1, -rtn pn9	
	DC Power Input Power Supply		:	Feed through filter solder tag +24Vdc, 0.25% regulation, <18A	

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICEISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.Tel: (703) 321 8301Fax: (703) 321 8546E-mail: ISOMET@ ISOMET.COMWeb Page: WWW.ISOMET.COM

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