

231A-1-45

Analog RF Driver

(for the Isomet Bragg Cell OPT-1)



902

Certain optical signal processing applications have evolved for the Isomet Bragg Cell OPT-1 requiring the use of a double-sideband amplitude modulated source of RF energy at a selected frequency and power level. Isomet Model 231A-1-45 analog driver has been optimized specifically for these applications.

Contained in the 231A-1-45 Driver is a free running quartz crystal 45MHz carrier frequency oscillator, a wideband balanced diode ring modulator, a bias level adjustment and a broadband Class A amplifier. Under control of the low level video (analog) input signal, the balanced ring modulator impresses the modulating video on the carrier. The resulting double-sideband AM signal is amplified in the broadband Class A amplifier. An externally accessible bias control permits adjustment of average output power from the driver. Depth of modulation is determined by the amplitude of the modulating input signal.

Efficient heat transfer from the driver requires that the mounting base be attached to an external heat sink not exceeding 70°C in temperature. Regulated DC power must be supplied by the user.

SPECIFICATIONS

Output impedance:	50Ω nominal
Load Mismatch VSWR:	2:1 maximum
Video Input Voltage:	1V peak-to-peak for 100% depth of modulation, DC coupled
Input Impedance:	50Ω source
Center Frequency:	45MHz
Frequency Accuracy:	± 0.005%
Frequency Stability:	± 0.003%
Modulation Bandwidth:	30MHz
Output RF Power:	> 1 Watt (adjustable)
DC Power input:	+28Vdc regulated to ± 0.25% @ 400mA
Temperature Range:	0°C to 60°C ambient, temperature at mounting face must not exceed 70°C
Mounting Orientation:	Any
Dimensions:	See Outline Drawing (reverse side)

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

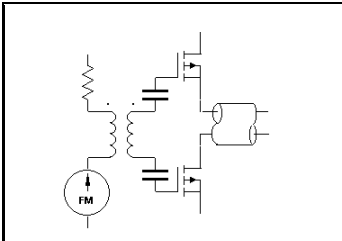
E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

Quality Assured.

In-house: RF & Digital design

Software Development

OEM manufacture



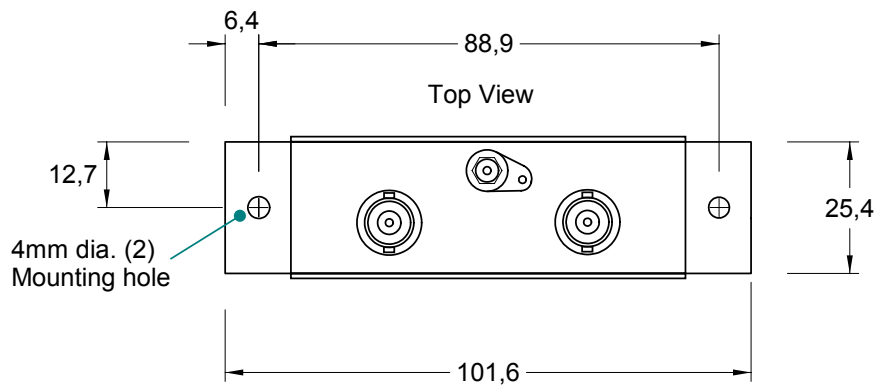
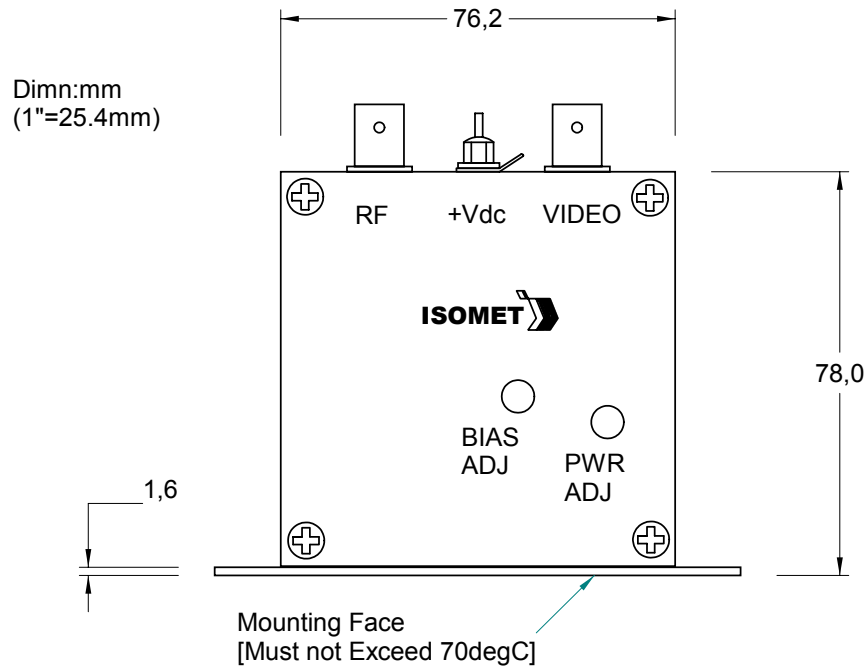
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OUTLINE DRAWING



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