831C-L Series

RF Driver

The 831C series Digital Modulation Drivers are designed to operate with Isomet 40MHz AO modulators, frequency shifters and mini Q-switches for the proportional (analog) control of laser beam intensity.

These RF drivers include a crystal oscillator, a wideband balanced diode ring mixer and RF power amplifier. The mixer is used to vary the amplitude of the RF carrier according to the modulation input signal. The resulting AM signal is subsequently amplified by a Class A MOSFET amplifier.

Efficient heat transfer from the driver is required. The mounting surface must be attached to an external heat sink capable of dissipating 8W.

SPECIFICATIONS

Output impedance:	50Ω Nominal
Load Mismatch VSWR:	2:1 Max
RF On-Off Ratio:	>40dB
Analogue Input:	0 - 1V * for 100% depth of modulation 50 ohm input impedance
Frequency Accuracy:	± 0.003%
Frequency Stability:	± 0.003%
Harmonics at 2W:	<25dBc
DC Power Input:	+12Vdc regulated to ± 1%, < 500mA
Temperature Range:	-40°C to 70°C ambient, temperature at mounting face must not exceed 70°C.
Mounting Orientation:	Any Ensure driver is mounted on a suitable heatsink

PERFORMANCE

Model	Centre Frequency	Minimum Rise/Fall Time	RF Drive Power	Supply
831C-L	40MHz	80/40nsec	>1.0 W	+12V dc
			>1.2 W	+15V dc
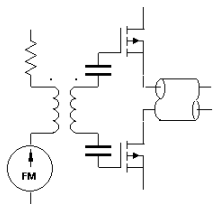
OUTLINE DRAWING

Dimensions: mm

MCX Female

2 wires
200mm long

10

5

11

19,1

MOD

ISOMET

Vdc
0V

Model:
sn:

RF

Remove snap in plug
for Pwr Adj access

SMC Male

43,2

38,1

38,1

2-56 UNF
5mm dp   2,5

2,5

2.6mm dia.
through

2-56 UNC
5mm dp

19

43,2

Mount on heat conducting
surface
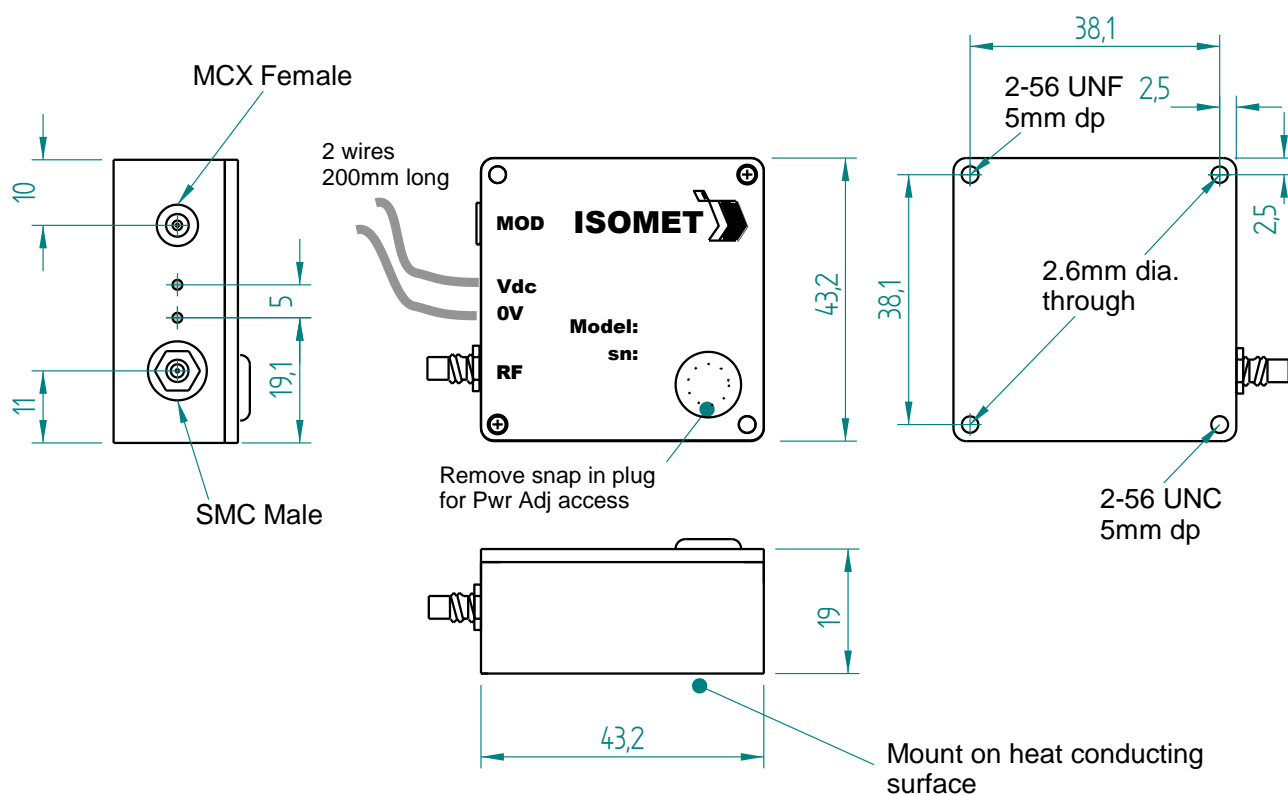
* Options   Add Suffix

0-5V   modulation   :   ' -V '
0-10V modulation   :   ' -X '