

iSA-SF2

Dual Output Frequency Synthesizer



0115

SPECIFICATIONS

The iSA-SF2 is a dual output programmable synthesizer designed for use with Isomet RF power amplifiers. This unit provides a highly stable tuneable frequency source for use with AO modulators, deflectors, tuneable filters and frequency shifters. The design includes a direct digital synthesizer (DDS) and 32-bit ARM processor (featuring internal FLASH, RAM, ADC and USBII interface). It is controlled in real time via USB or may be pre-programmed for autonomous operation. External controls are applied through a 25way D-type connector. (External inputs are not necessary to operate the driver). Windows based operating software is supplied.

On power-up, the uC configures the DDS and loads a user defined frequency / phase / amplitude "MAP" previously stored in FLASH memory. The internal memory may store up to 8 unique MAP's. Each MAP may contain up to 16 independent frequency values. These are selected by the profile address inputs using PC control or external inputs to the 25way D-connector.

The driver can be easily programmed to output sweeps or step changes in frequency or phase or amplitude.

Both driver outputs are derived from a common reference frequency. The differential frequency shift is therefore highly stable making this unit ideally suited to heterodyne applications.

Windows based GUI software supplied

Output frequency range:

Model	Variant	Frequency range	RF power per output
iSA-SF2-	w	20-200 MHz	1mW (0dBm) at 80MHz
iSA-SF2-	e	150-250 MHz	2mW (3dBm) at 200MHz

Frequency resolution (full range): 32 bit inherent,
1Hz using Isomet GUI Software.

Frequency stability: < +/- 25ppm (common mode)
< +/- 1ppm (differential mode)

Output power flatness: < +/- 1dB / octave

Harmonics: < 25dBc

Ch-Ch crosstalk: > 40dB at 80MHz, 1mW

RF power adjustment: > 30dB range via external analog modulation input.
> 60dB range via digital control

Matching power amplifiers: 500C series, RFA100, RFA200, RFA200-2

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

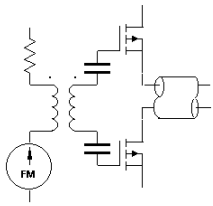
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Quality Assured.

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



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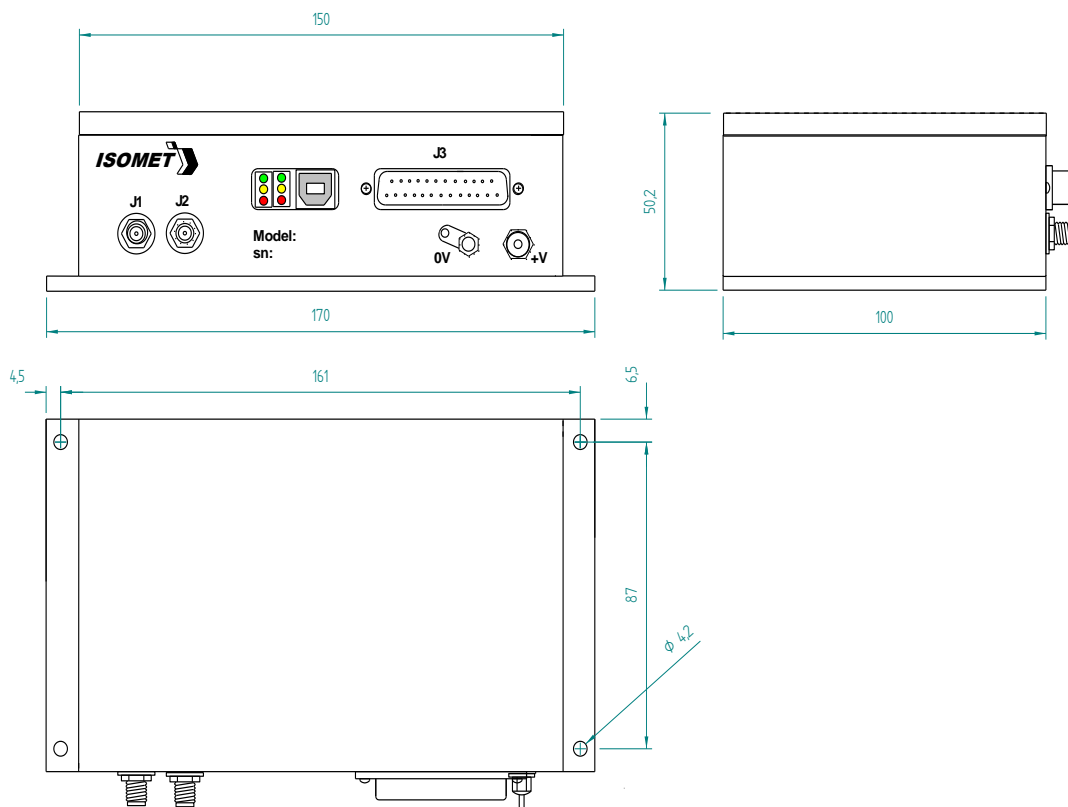


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Interface

Output (x2):	Signal:	J1: RF, 50ohm, SMA connector	
		J2: RF, 50ohm, SMA connector	
Inputs:	Control Inputs:	External:	25way male D-type
		Logic signals:	LVTTL, 3V3 compatible
		Analog Modulation/Level:	0 – 5V
	Host PC:	USB II	
	DC power:	24V at < 0.6A, solder feed through	

OUTLINE DRAWING



Dimensions: mm

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