



# iSK3-xxT-1-1, -2, -4, -6



## Frequency Synthesizer & RF Driver

0423

### SPECIFICATIONS

The iSK3 series are single output RF drivers designed to operate with Isomet AO deflectors, tuneable filters and frequency shifters. The driver includes a direct digital synthesizer (DDS) a 32-bit ARM processor (uC) featuring internal FLASH, RAM, ADC and USBII interface and single RF power amplifier. The driver can be directly 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).

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 also be configured to output frequency sweeps.

Windows based GUI software supplied. No SDK.

**Example order code: iSK3-80T-1-4**

Model range:

Model			Frequency range	RF output power
iSK3 -	100T - 1	- 1	20-200 MHz	1.2 W
	36T - 1	- 1 / -2 / -4	24-48 MHz	1W / 2W / 4W
	45T - 1	- 1 / -2 / -4	30-60 MHz	1W / 2W / 4W
	60T - 1	- 1 / -2 / -6	45-85 MHz	1W / 2W / 6W
	80T - 1	- 1 / -2 / -4	60-100 MHz	1W / 2W / 4W
	105T - 1	- 1 / -2 / -4	80-130 MHz	1W / 2W / 4W
	150T - 1	- 1 / -2	125-200 MHz	1W / 2W

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

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

Maximum Power, RF output: see table  
Ref RF Out: > 100mWpp, 50ohm

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

Harmonics: < 25dBc

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

#### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

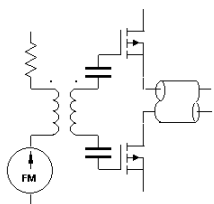
ISOMET CORP, 10342 Battlevue Parkway, Manassas, VA 20109, USA.

Tel: (703) 321 8301 Fax: (703) 321 8546

E-mail: [ISOMET@ISOMET.COM](mailto:ISOMET@ISOMET.COM) Web Page: [WWW.ISOMET.COM](http://WWW.ISOMET.COM)

Quality Assured.

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



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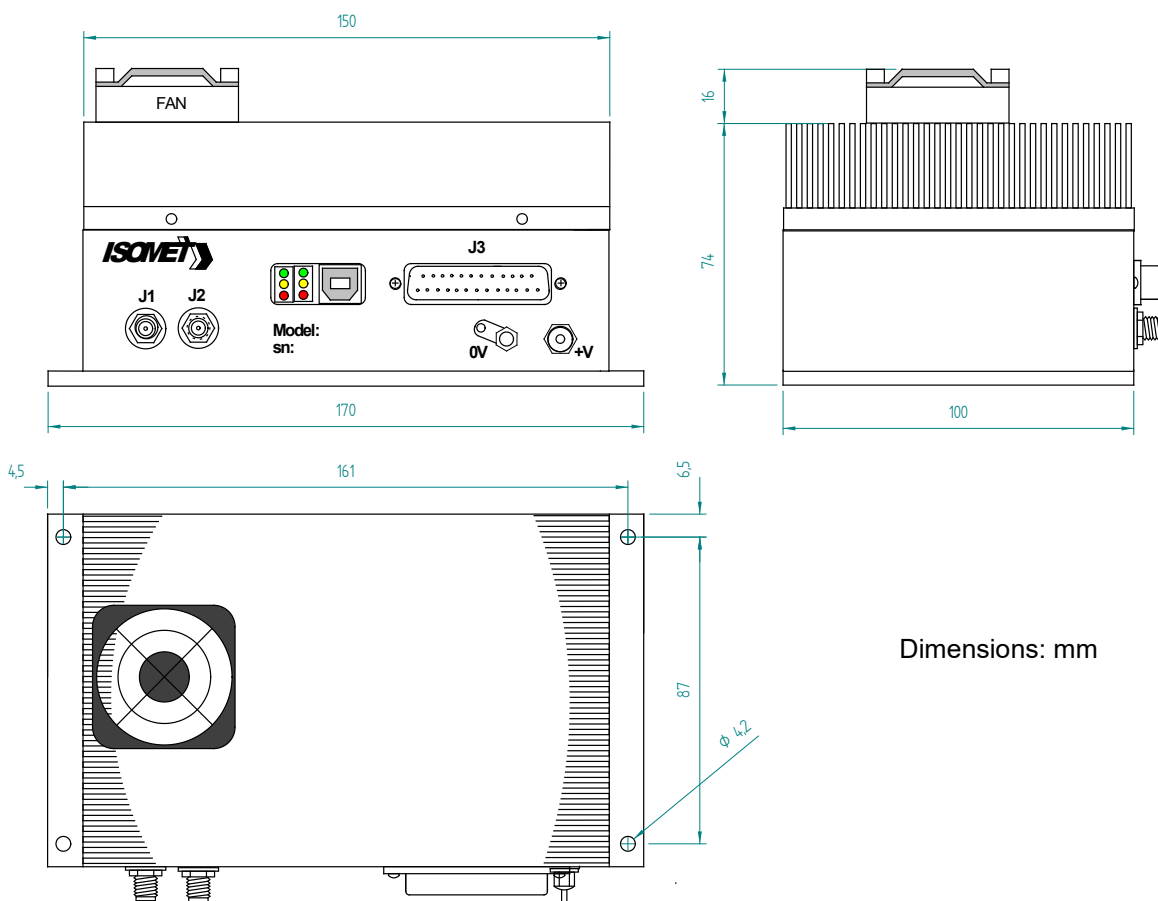
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### Interface

Output (x2):	Signal:	J1: Main RF output, 50ohm, SMA connector J2: Low level reference output, 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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 E-mail: [ISOMET@ISOMET.COM](mailto:ISOMET@ISOMET.COM) Web Page: [WWW.ISOMET.COM](http://WWW.ISOMET.COM)

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