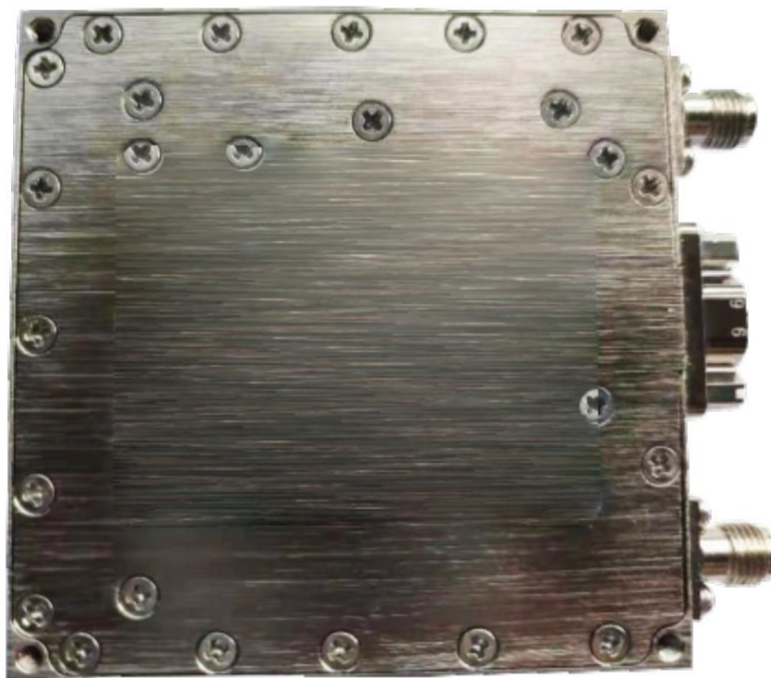


WIDEBAND FAST-SWITCHING FREQUENCY SYNTHESIZER



1.25 to 10 GHz

Fast frequency switching
SPI control
0.1 Hz frequency step
Switching time: $\leq 10 \mu\text{s}$; communication time excluded
65 × 65 × 13 mm package
Weight: $\leq 160 \text{ g}$

The OTFS40-10 is a wideband fast-switching frequency synthesizer with an output frequency range of 1.25 to 10 GHz. Control interface: SPI. Reference frequency: 100 MHz. The frequency step is 0.1 Hz. Frequency switching time: $\leq 10 \mu\text{s}$; communication time excluded. Output power: $\geq 5 \text{ dBm}$. Dimensions: 65 × 65 × 13 mm. Weight: $\leq 160 \text{ g}$. Operating temperature: -40 to +70 °C.

TECHNICAL INFORMATION

OTFS40-10

Property	Value
Output frequency range	1.25-10 GHz
Frequency step	0.1 Hz
Frequency switching time	≤10 µs; communication time excluded
Output power	≥5 dBm
Frequency stability	Tracks the external reference
Spurious level	≤-65 dBc typical; ≤-60 dBc maximum
Harmonic level	≤-5 dBc
Reference frequency	100 MHz
Reference input power	7 ±3 dBm
Reference phase noise	-125 dBc/Hz at 100 Hz offset; -155 dBc/Hz at 1 kHz offset; -165 dBc/Hz at 10 kHz offset; -165 dBc/Hz at 100 kHz offset; -170 dBc/Hz at 1 MHz offset
Supply voltage	+12 V ±0.5 V; maximum +15 V
Supply current	≤1.5 A startup; ≤0.8 A steady state
Control interface	SPI
Operating temperature	-40 to +70 °C
Storage temperature	-55 to +85 °C
Dimensions	65 × 65 × 13 mm
Weight	≤160 g
RF/reference connectors	SMA-K
Power/control connector	J30J-9-ZKP

Specification Notes

The source family table includes a 1 GHz phase-noise point outside both stated output ranges. It is retained separately for traceability and is not an in-range specification: ≤-105 / -120 / -125 / -125 / -125 dBc/Hz at 100 Hz / 1 kHz / 10 kHz / 100 kHz / 1 MHz offsets.

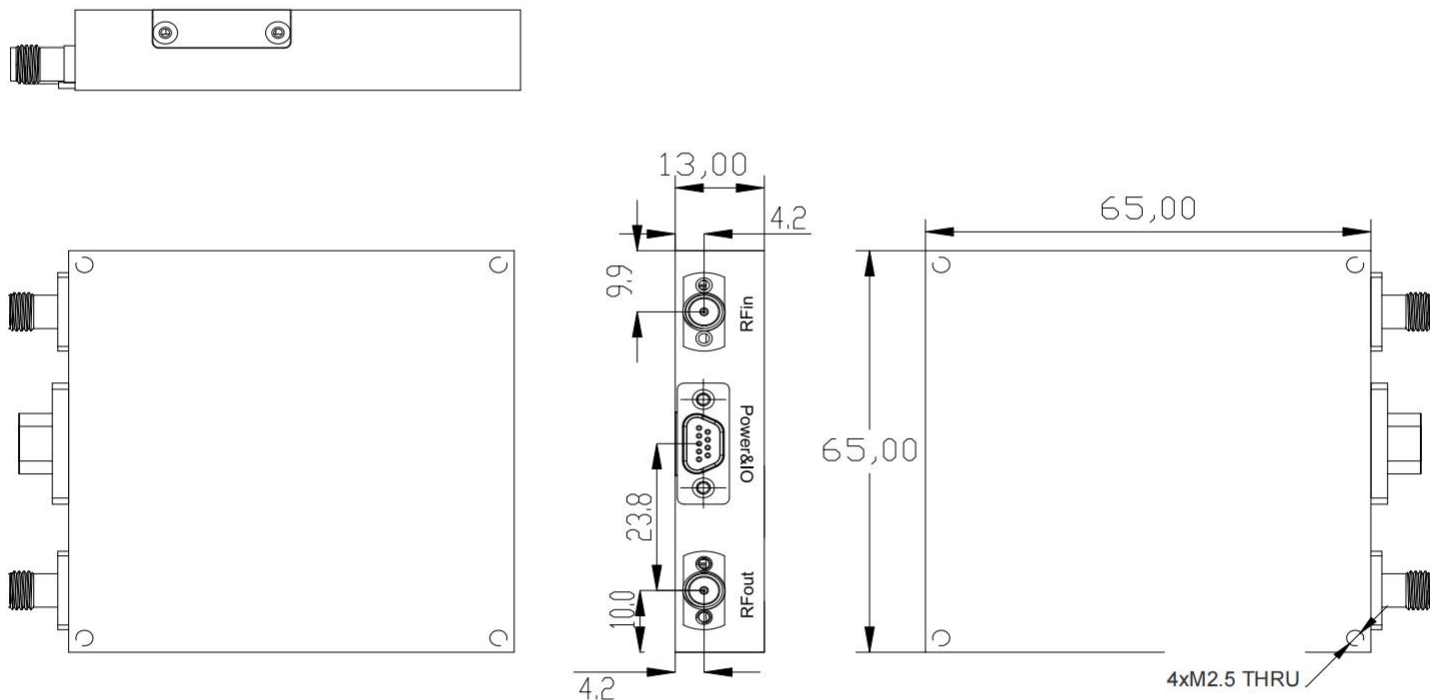
TECHNICAL INFORMATION

OTFS40-10 | Phase Noise (dBc/Hz)

Output Frequency	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz
5 GHz	≤ -91	≤ -106	≤ -111	≤ -111	≤ -111
10 GHz	≤ -85	≤ -100	≤ -105	≤ -105	≤ -105

Column headings specify frequency offset from the carrier. Output frequency is listed in the first column. Values and limit signs follow the source tables.

Mounting Dimensions



Dimensions in mm.

INTERFACES & PIN ASSIGNMENTS

Connector Definitions

Connector	Definition
RF/reference connectors	Removable SMA-K; pin diameter 0.38 mm
Power/control	J30J-9-ZKP

J30J-9-ZKP Pin Assignments

Pin	Definition
1	+12 V supply
2	+12 V supply
3	GND
4	GND
5	LD: lock indication, high when locked
6	MOSI: SPI interface
7	MISO: SPI interface
8	SCK: SPI interface
9	LE: SPI interface