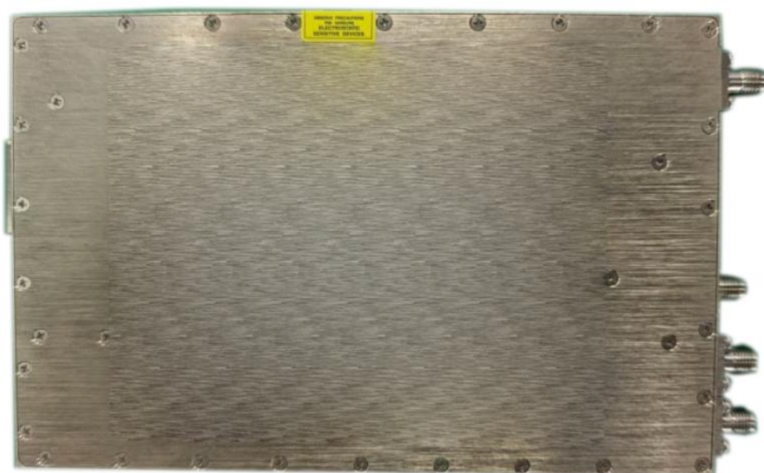


WIDEBAND FAST-SWITCHING FREQUENCY SYNTHESIZER



1.25 to 20 GHz

Fast frequency switching
Parallel interface control
10 kHz frequency step
Switching time: ≤ 300 ns
146.1 × 95 × 18 mm package
Weight: ≤ 0.65 kg

The OBFS110-0120 is a wideband fast-switching frequency synthesizer with an output frequency range of 1.25 to 20 GHz. Control interface: Parallel interface. The frequency step is 10 kHz. Frequency switching time: ≤ 300 ns. Output power: ≥ 10 dBm. Dimensions: 146.1 × 95 × 18 mm. Weight: ≤ 0.65 kg. Operating temperature: -40 to +70 °C.

TECHNICAL SPECIFICATIONS

OBFS110-0120

Property	Value
Output frequency range	1.25-20 GHz
Frequency step	10 kHz
Frequency switching time	≤300 ns
Output power	≥10 dBm
Frequency stability	2×10^{-7} ; follows external reference when connected
Spurious level	≤-65/-60 dBc (typical/maximum; 1.25-20 GHz)
Harmonic level	≤-5 dBc
Supply voltage	+12 V
Supply current	2.5 A startup; 1.8 A steady state
Control interface	Parallel interface
Operating temperature	-40 to +70 °C
Storage temperature	-55 to +85 °C
Dimensions	146.1 × 95 × 18 mm
Weight	≤0.65 kg
Reference connector	SMA female
RF output connector	2.92 mm female
Power/control connector	J30J-31
Pulse modulation depth	≥60 dBc (1.25-20 GHz); tested at +10 dBm
Pulse width	100 ns-10 ms
Pulse rise/fall time	≤50 ns / ≤100 ns

TECHNICAL INFORMATION

OBFS110-0120 | Phase Noise (dBc/Hz)

Output Frequency	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz
1.25 GHz	≤ -110	≤ -128	≤ -135	≤ -135	≤ -143
10 GHz	≤ -90	≤ -110	≤ -118	≤ -118	≤ -126
20 GHz	≤ -84	≤ -104	≤ -112	≤ -112	≤ -120

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

Specification Notes

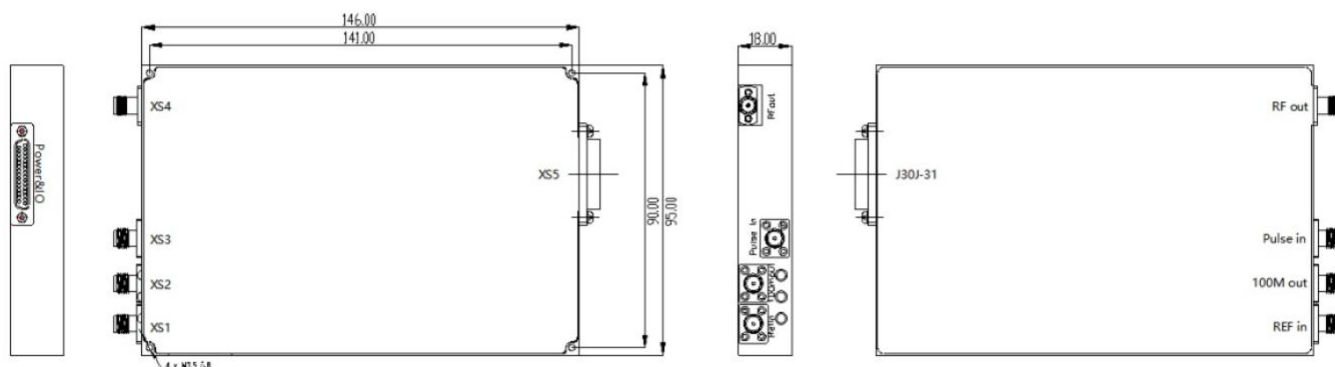
The supplied 10 GHz analyzer screenshot displays UNLOCKED. It is reproduced as a source measurement record, not as proof of a valid locked-state test or a guaranteed specification.

The feature text specifies $146 \times 95 \times 18$ mm, while the specification table states $146.1 \times 95 \times 18$ mm. Both source values are retained.

Source Catalogue Overview

The OBFS110 series is an ultra-fast frequency-hopping source with switching between any two frequencies in its specified range in 300 ns or less. The family covers 1.25 to 40 GHz with a minimum frequency step of 10 kHz and low phase noise: at 10 GHz output, phase noise reaches -110 dBc/Hz at 1 kHz offset. Its compact $146 \times 95 \times 18$ mm package is suitable for many RF systems, particularly fast frequency-hopping systems with stringent switching-time requirements. The source describes established design and manufacturing processes intended to provide high reliability and suitability for demanding RF systems.

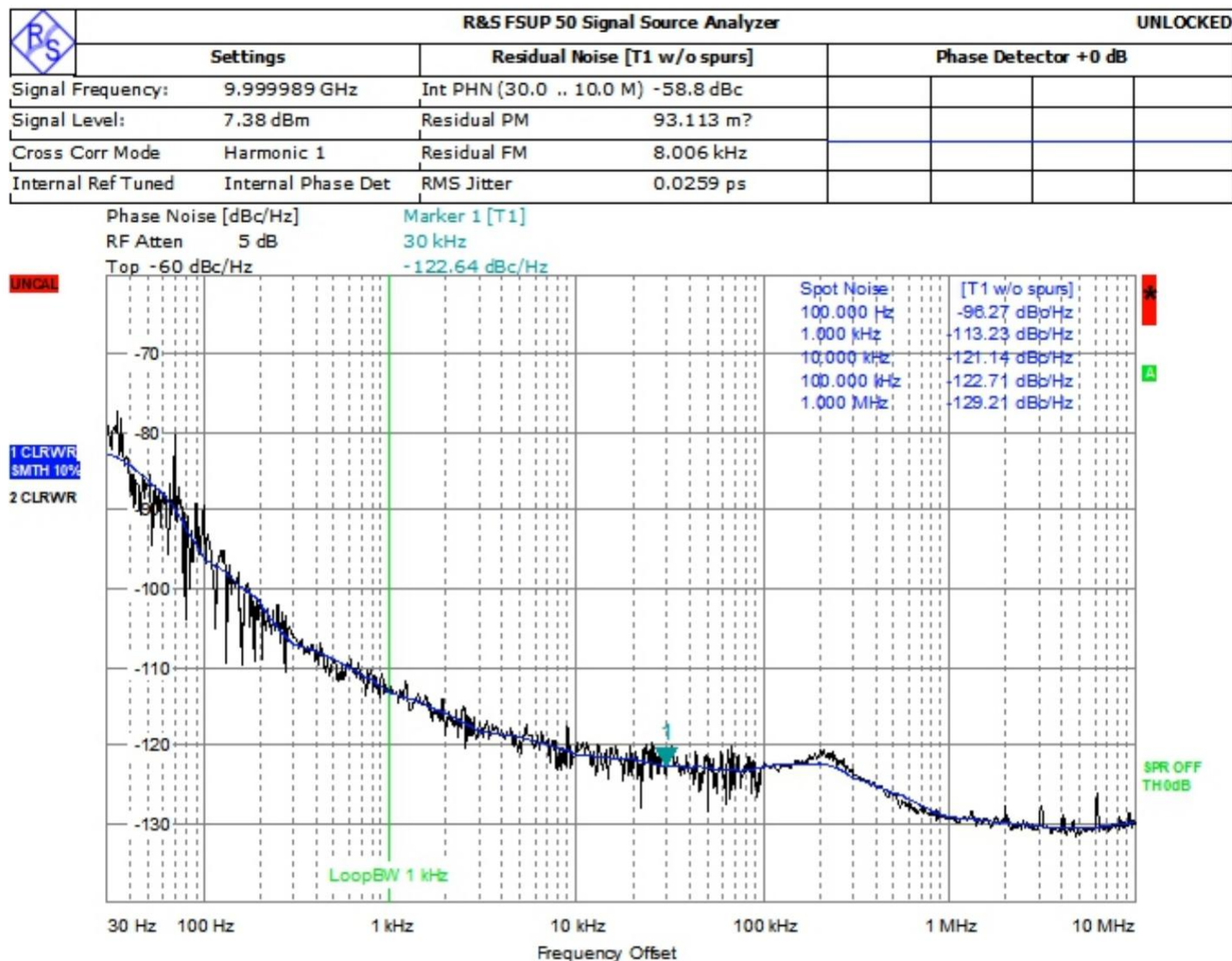
Mounting Dimensions



Dimensions in mm.

MEASUREMENT CURVES

10 GHz Source Measurement Record



Source measurement record: analyzer displays UNLOCKED.

INTERFACES & PIN ASSIGNMENTS

Connector Definitions

Connector	Definition
XS1 / REF in	SMA female
XS2 / 100M out	SMA female
XS3 / PULSE	SMA female
XS4 / RF out	2.92 mm female
XS5 / Power and control	J30J-31 miniature connector

J30J-31 Power / Parallel-Control Pin Assignments

Pin	Definition
1	+12 V
2	LD: lock indication
3	+12 V
4	NC
5	GND
6	N1: parallel control word, least significant bit
7-26	N2-N21: parallel control word
27	PULSE: pulse modulation input
28	N22: parallel control word, most significant bit
29	NC
30	LE: latch enable
31	NC