

STANDARD PDRO



1 to 16 GHz

Low phase noise
50.8 × 47.8 × 15.7 mm package
Internal / external reference options
Fixed output frequency

The OPDRO50 is a phase-locked dielectric resonator oscillator with a fixed output frequency selected within 1 to 16 GHz. Reference frequency: 100 MHz. Output power: ≥ 10 dBm. Dimensions: 50.8 × 47.8 × 15.7 mm. Operating temperature: -40 to +70 °C.

TECHNICAL INFORMATION

OPDRO50

Property	Value
Output frequency range	1-16 GHz; fixed frequency selected when ordering
Output power	≥10 dBm
Spurious suppression	≥70 dBc
Harmonic suppression	≥20 dBc
Reference frequency	100 MHz
Reference input power	+3 to +10 dBm
Reference phase noise	-157 dBc/Hz at 1 kHz offset
System phase-noise floor	-140 dBc/Hz at 100 Hz offset; -158 dBc/Hz at 1 kHz offset; -165 dBc/Hz at 10 kHz offset; -165 dBc/Hz at 100 kHz offset
Supply voltage	+12 V
Supply current	≤350 mA (external reference); ≤650 mA (internal reference)
Lock indication	TTL high when locked
Operating temperature	-40 to +70 °C
Storage temperature	-55 to +85 °C
Dimensions	50.8 × 47.8 × 15.7 mm
Ordering configuration	Fixed output frequency; 80/100/120 MHz reference options; internal/external reference options; output frequency may be an integer or fractional multiple of the reference; fractional-mode resolution 1 Hz.

Specification Notes

Internal-reference outlines show 35.7 mm height, whereas the source specification and ordering tables list 15.7 mm. Confirm configuration-specific dimensions before ordering.

RF and reference connector types are not specified in the source. Refer to the selected model and reference configuration when confirming the order.

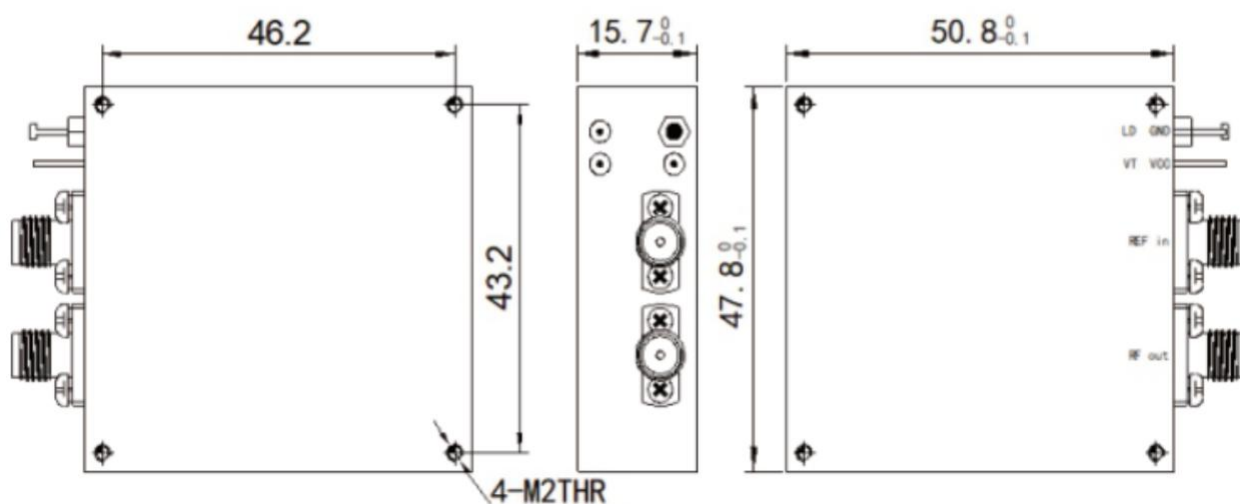
TECHNICAL INFORMATION

OPDRO50 | Phase Noise (dBc/Hz)

Output Frequency	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz
1 GHz	-108	-133	-135	-135	-140
2 GHz	-102	-126	-131	-131	-140
4 GHz	-96	-120	-126	-126	-140
6 GHz	-92	-116	-120	-120	-140
8 GHz	-92	-115	-120	-120	-140
10 GHz	-88	-113	-120	-120	-140
12 GHz	-88	-110	-118	-120	-140
14 GHz	-86	-108	-118	-118	-140
16 GHz	-83	-108	-116	-116	-138

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

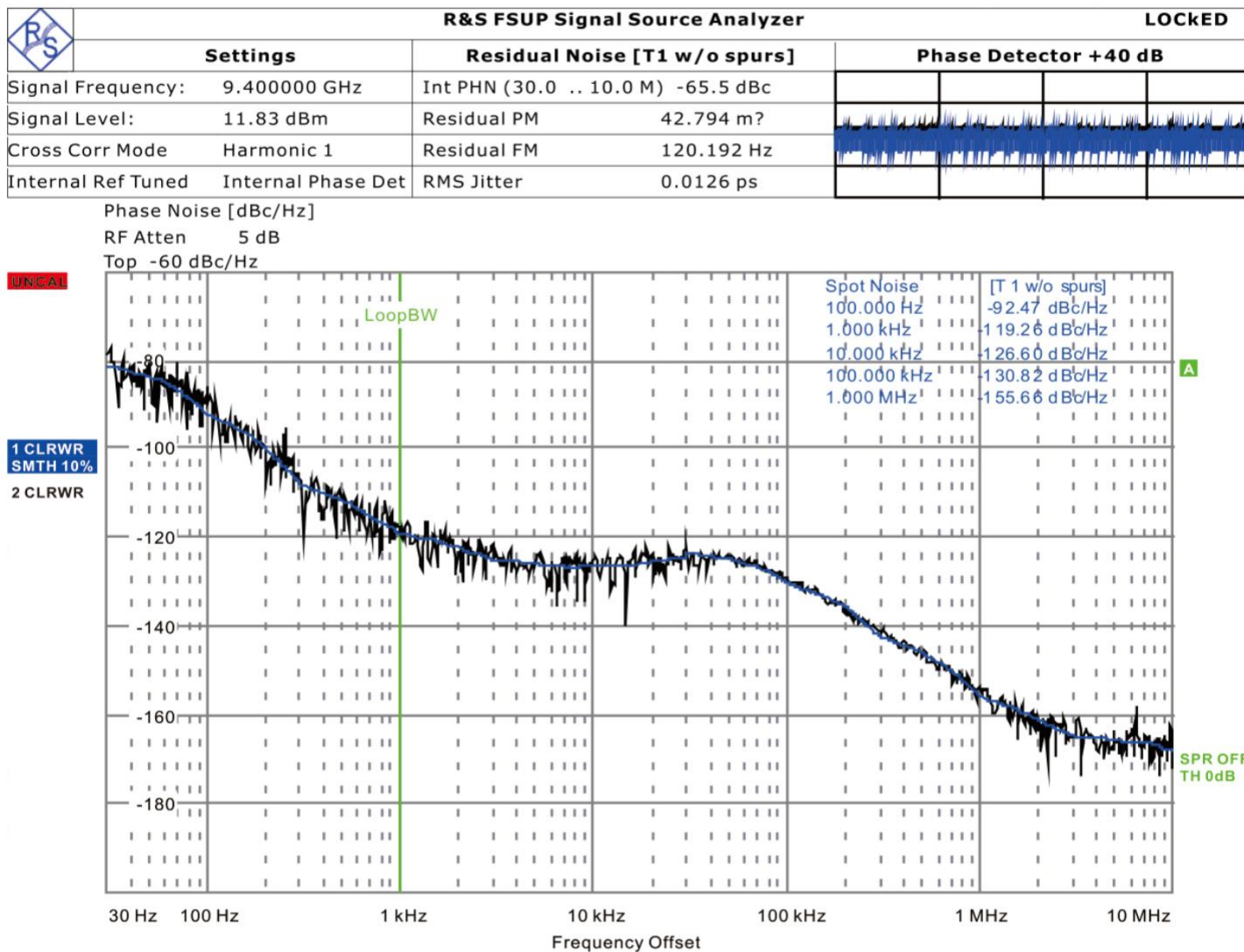
OPDRO50 | External Reference



Dimensions in mm.

PHASE NOISE MEASUREMENT

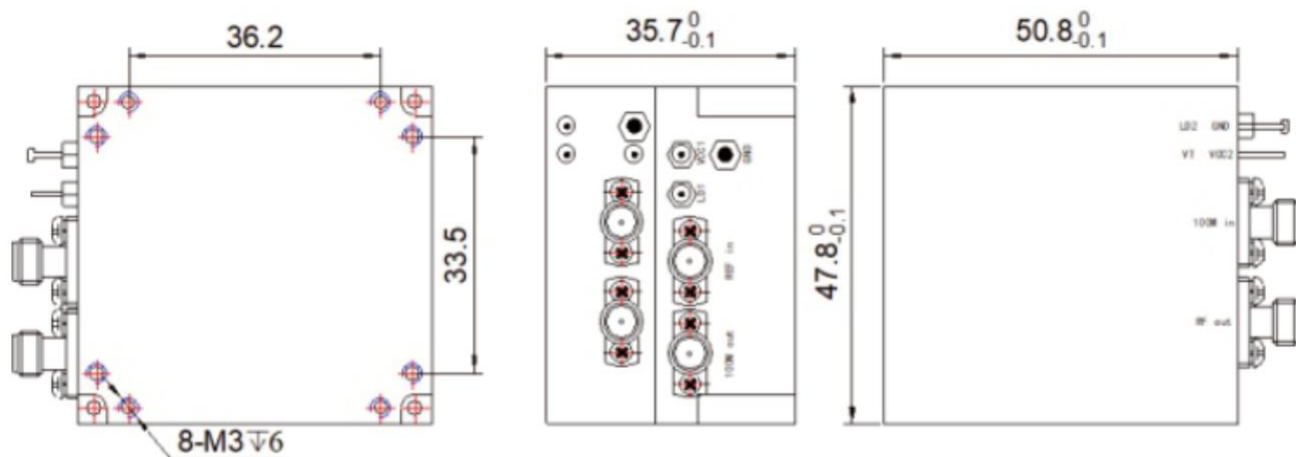
Source Measurement Example | 9.4 GHz



Product-family example at 9.4 GHz. Tested model/configuration is not identified in the source; the trace is not a guaranteed specification.

TECHNICAL INFORMATION

OPDRO50 | Internal Reference



Dimensions in mm.

OPDRO50-XXXX-100-E/I-10

Code field	Description
XXXX	PDRO output frequency. The output frequency can be an integer or fractional multiple of the reference frequency. Output frequency resolution in fractional mode: 1 Hz.
100	Input reference frequency. Available reference frequencies: 80 / 100 / 120 MHz.
E / I	E: external reference input. I: internal reference.
10	Output power: 10 dBm.