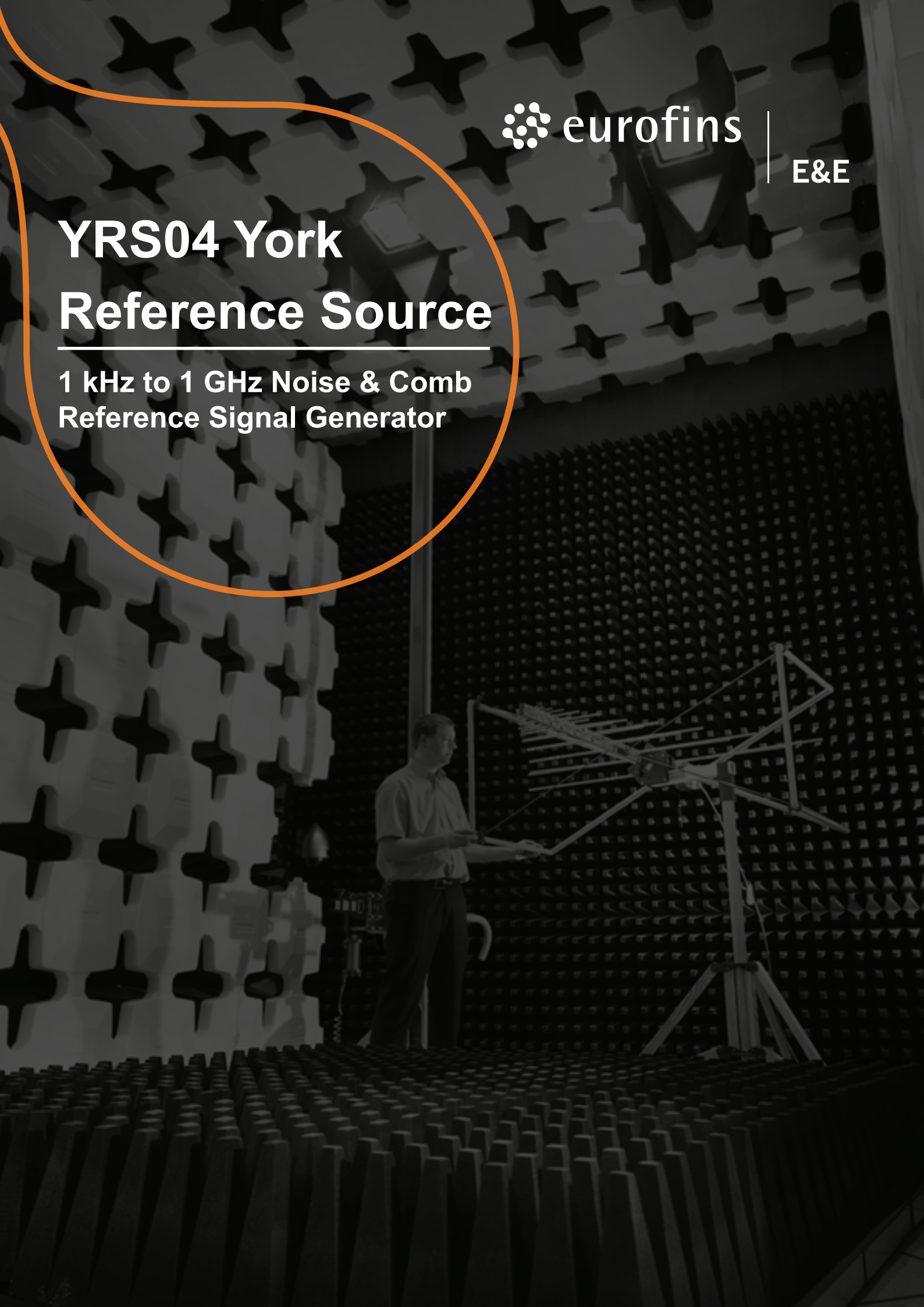




E&E

YRS04 York Reference Source

1 kHz to 1 GHz Noise & Comb
Reference Signal Generator



The YRS04 is a Noise and Comb reference noise generator, capable of outputting over a frequency range of 1 kHz to 1 GHz

It is the ideal reference source for carrying out the verification and validation of conducted and radiated measurement systems as well as in the investigation and characterisation of measurement environments such as Fully- or Semi-Anechoic chambers, Open Area Test Sites.



Overview

The YRS04 is one of Eurofins E&E UK's latest line of noise and comb reference sources, building on more than 30 years experience of producing quality signal reference sources for EMC test laboratories.

The YRS04 can generate output signals covering 1 kHz to 1 GHz and combines both noise and comb signal capabilities in a single device.

The YRS04 is battery-powered for standalone operation without additional power cables, and features dual 50 Ω N-type output connectors for direct connection to conducted measurement systems.

For conducted emission test systems, the optional NIA02 is a direct-coupling adapter providing an IEC 320 inlet for single-phase LISNs and a selection of 4 mm connections for general-purpose test applications.

A configurable monopole antenna is available, allowing the YRS04 to be used as a standalone reference radiating source in an electromagnetic test environment or radiated emission test system such as a Fully- or Semi-Anechoic Room.

The YRS05 is compact, with its small size and shape designed to produce a uniform radiated field.

Features

- 1 kHz to 1 GHz output
 - Applications across a broad spectrum of uses
- Stable output
 - Repeatable measurements
- Selectable noise or comb output
 - Flexibility across a range of applications
- Compact and portable
 - 85 x 85 x 85 mm, 0.8 kg
- Battery power supply
 - No power cable effects on measurements

Applications

- Conducted and radiated measurement systems validation and verification
- Investigation and characterisation of different measurement environments such as Fully- or Semi-Anechoic chambers, Open Area Test Sites
- Reference source for:
 - Regular pre-test checks as required to satisfy accreditation authorities and standards such as ISO 17025, DEF STAN 59-411
 - Comparisons between test sites
 - Long-term performance monitoring
 - Investigation of screened room behaviour
 - Cable loss measurements
- Evaluating component assembly characteristics e.g. filter loss, amplifier gain and bandwidth
- Spectrum analyser, receiver, antenna, and cable pre-checks
- Inter-laboratory and Proficiency Test programs

YRS04 Specifications

General

Frequency range	1 kHz to 1 GHz direct connection into 50 Ω system 100 kHz to 1 GHz radiated using MON04 antenna
Temperature Stability	< +/- 1 dB, 1 kHz to 1 GHz, at an ambient of 15°C to 30°C < +/- 1.5 dB, 1 kHz to 1 GHz, at an ambient of 5°C to 40°C
Time Stability	< 1dB typical over 12 month period

Noise Modes

Output Level	see Graphs
Operating Time	> 10 hours LF Noise mode typical with alkaline cells > 6 hours HF Noise mode typical with alkaline cells

Comb Modes

Comb Signal Step Size	LF Comb mode 1	1 kHz comb	1 kHz, 2 kHz.....500 kHz
	LF Comb mode 2	10 kHz comb	10 kHz, 20 kHz.....5 MHz
	LF Comb mode 3	100 kHz comb	100 kHz, 200 kHz...30 MHz
	HF Comb mode 1	1 MHz comb	1 MHz, 2 MHz.....300 MHz
	HF Comb mode 2	10 MHz comb	10 MHz, 20 MHz.....1 GHz

Output Level	60 dB μ V min. into 50 Ω system for \geq 90% of combs in each range
Frequency Stability	< +/- 30 ppm max, < +/- 10 ppm typ, at an ambient of 5°C to 40°C
Operating Time	> 10 hours All modes, typical with alkaline cells

Other

Output Connectors	2 x 50 Ω N-type, LF: 1 kHz to 30 MHz and HF: 30 MHz to 1 GHz	
Dimensions	85 mm x 85 mm x 85 mm excluding connectors and switches	
Weight	0.75 kg excluding cells	
Power Supply	4 x cells AA or equivalent, alkaline or rechargeable NiMH	
Indicators	Power Mode	Active, Cell Voltage Low, Replace cells Noise signal output, Comb signal output
Controls	Rotary switch	LF noise LF comb modes OFF HF Comb modes HF noise

Standard Kits

Part Number	Description	Parts Included
YRS04KIT1	Standard YRS04 Kit	<ul style="list-style-type: none"> • YRS04 reference source • MON04 monopole antenna
YRS04KIT2	Enhanced YRS04 Kit	<ul style="list-style-type: none"> • YRS04 reference source • MON04 monopole antenna • NIA02 coupling adapter

All kits are supplied with

- Alkaline batteries;
- Hard case
- CD or USB memory stick containing manual and calibration data
- CAL23 manufacturer's test certificate showing output power from 1 kHz to 1 GHz measured using a spectrum analyser, all modes.

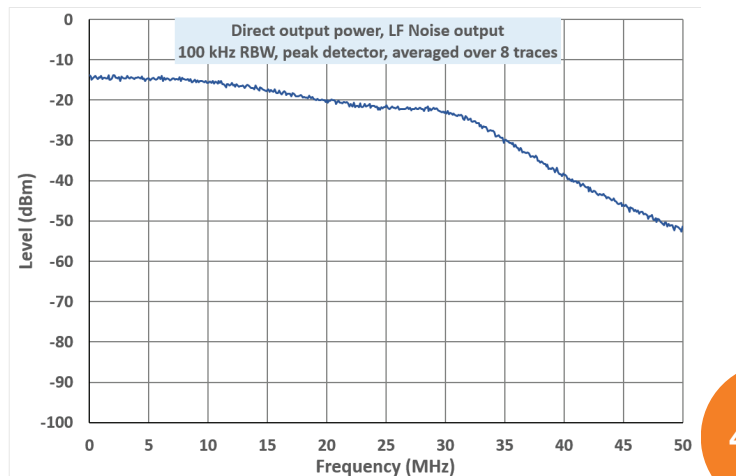
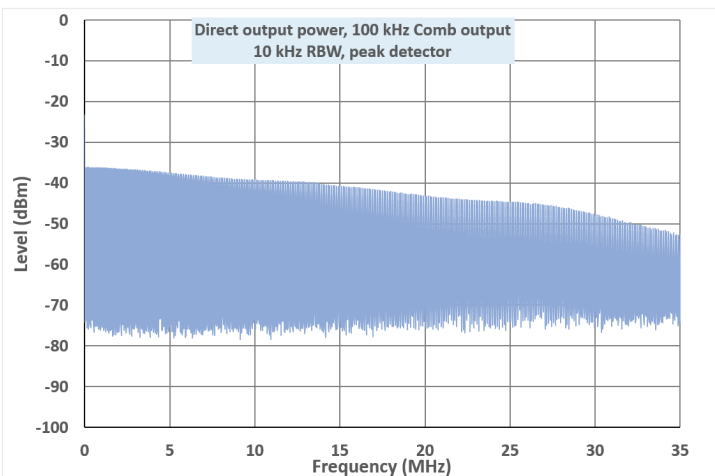
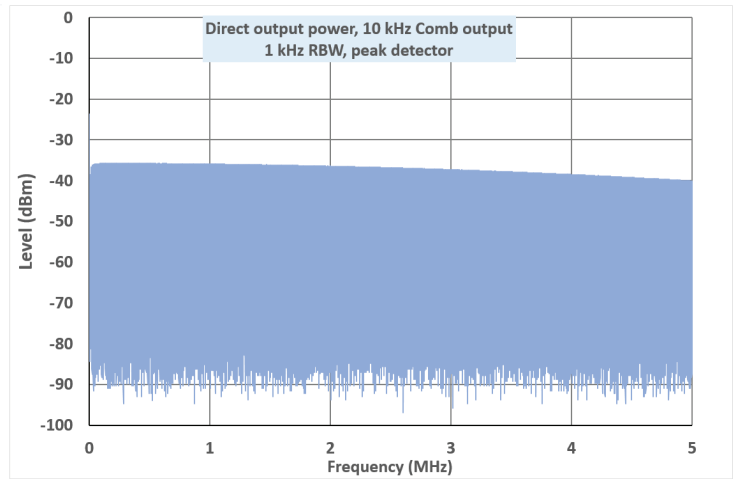
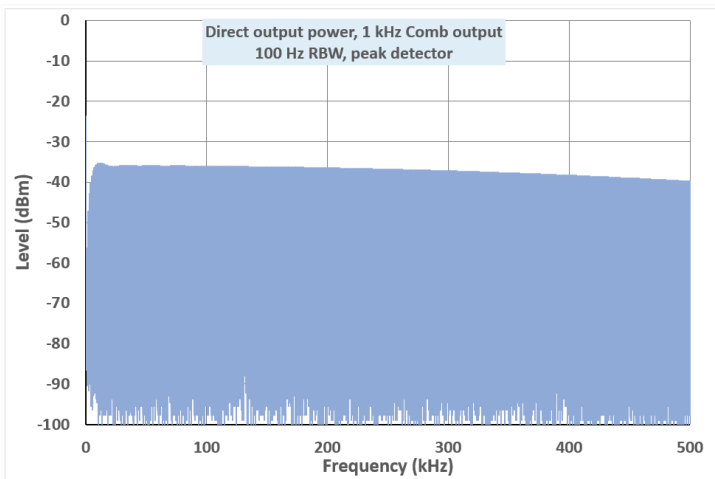
Accessories

Part Number	Description
MON04	270 mm / 560 mm / 850 mm configurable monopole antenna
NIA02	LISN / ISN adapter with IEC 320 style connector and 4 mm socket connectors

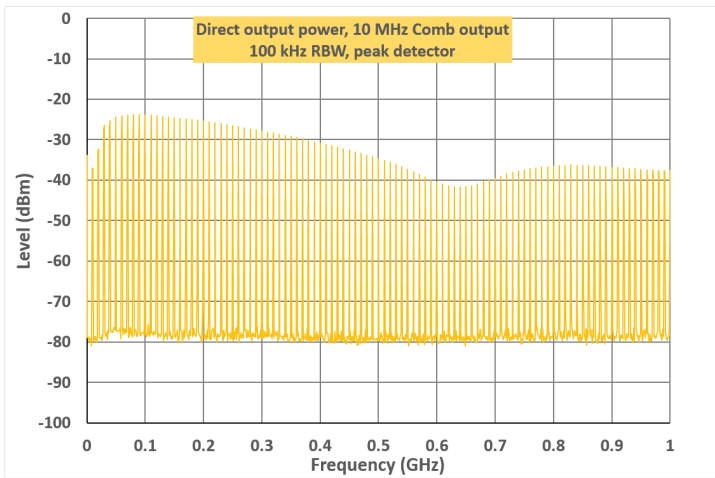
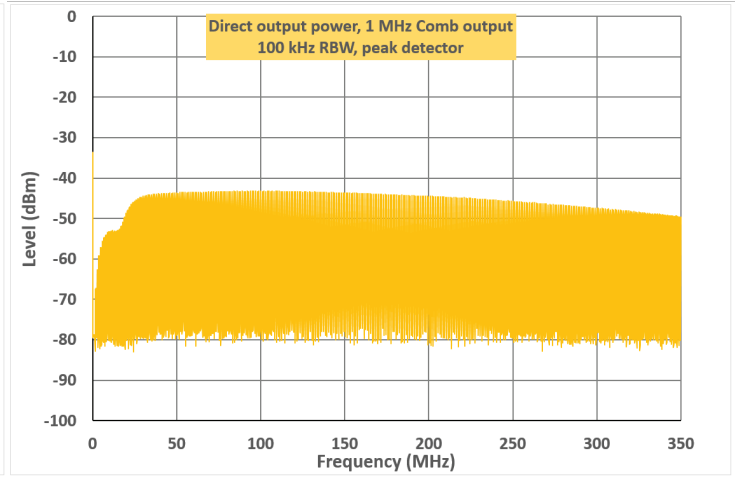
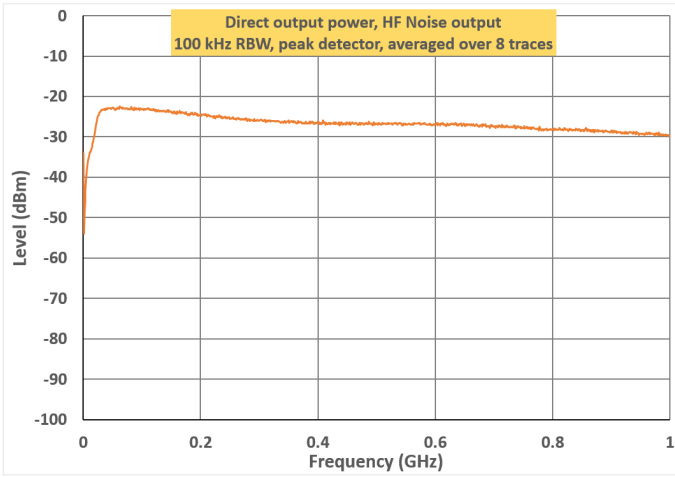


YRS04KIT02 - Shown without carrying case

YRS04 Typical direct output measurement results



YRS04 Typical direct output measurement results



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