R&S[®]FPL1-K30 noise figure and gain measurements Simple and accurate measurements using the Y-factor method



Measure the noise figure and gain of amplifiers using an R&S°FPL1000 with the R&S°FPL1-K30 option and a noise source

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Characterization of amplifiers

Optimization of radio frontends

Key specifications				
Noise figure measurement range	Noise source ENR 4 dB to 7 dB 12 dB to 17 dB 20 dB to 22 dB	Measurement range 0 dB to 20 dB 0 dB to 30 dB 0 dB to 35 dB		
FPL1000 noise figure uncertainty	± 0.05 dB (10 MHz t	to 7.5 GHz)		
Measurement accuracy	± 0.15 dB (10 MHz to 7.5 GHz)			

Your benefit	Features
Compact solution – no additive setup required	Many additional RF measurements (harmonics, spurious, etc.) possible
Powerful tool for development and qualification of amplifier circuits	Noise figure and gain measurements
Everything needed visible on one screen	Graphical and numerical display of all results

Characterize key amplifier specifications accurately using the Y-factor method

The following parameters can be measured at a specified frequency or in a selectable frequency range:

- Noise figure in dBGain in dB
- Y factor in dB

The noise source is controlled by the 28 V output on the R&S°FPL1-B5 additional interfaces unit on the back of the instrument. With an optional R&S°FPL1-B22 RF preamplifier, the sensitivity of the measurement can be improved for measuring devices with a low noise figure, e.g. LNAs.

The advantage of the R&S°FPL1-K30 compared to conventional noise measurement systems is that a wide variety of other RF measurements can also be performed, for example measurement of harmonics, intermodulation and spurious responses.

▷ For more information, visit

www.rohde-schwarz.com/catalog/FPL1000



Option Sheet | 02.00 R&S®FPL1-K30

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ultiView 🎫 S	spectrum 🛛 🗙 No	oise 🐺 🗙				•	Referenc
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			40 dB				↓ Display
			35 dB				
			Ť ≥γ dB				
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					M1		
IB A A			15 dB				7
iB	M1		10 dB				
0.0 MHz	101 pts 299.0 MHz/	. ,	z 10.0 MHz		.0 MHz/ (RF)	3.0 GHz	Network
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		M1[1] 10.68 d 1.810 GH		19.43 dB	41.82 dB	0.91 dB	C
	M1	1.810 GH	40.000 MHz	12.28 dB	31.50 dB	3.42 dB 💻	System
dB			70.000 MHz	10.43 dB	30.09 dB	4.57 dB	1 Config
"			100.000 MHz	9.63 dB	28.47 dB	5.12 dB	
IB V			130.000 MHz	9.18 dB	24.70 dB	5.41 dB	Service -
ip/ I V			160.000 MHz	8.85 dB	23.25 dB	5.66 dB	Support
B			190.000 MHz	8.40 dB	21.88 dB 21.51 dB	5.96 dB	(
			220.000 MHz	7.78 dB 7.07 dB	21.51 dB 22.75 dB	6.44 dB 7.02 dB	
			250.000 MHz 280.000 MHz		22.75 dB 22.15 dB		
			- 310.000 MHz	6.68 dB 6.39 dB	22.15 dB 21.14 dB	7.33 dB 7.55 dB	
			340.000 MHz	6.19 dB	20.52 dB	7.55 dB 7.72 dB	
			370,000 MHz	5.88 dB	18.98 dB	7.93 dB	
			100 000 1111	9.65 dB	19.82 dB	5.09 dB	Overview
0.0 MHz	101 pts 299.0 MHz/	(RF) 3.0 GH					

Model configuration information				
Description	Туре			
Signal and spectrum analyzer, 5 kHz to 3 GHz	R&S [®] FPL1003			
Signal and spectrum analyzer, 5 kHz to 7.5 GHz	R&S [®] FPL1007			
Options				
Noise figure and gain measurement application	R&S [®] FPL1-K30			
Additional interfaces	R&S®FPL1-B5			
RF preamplifier	R&S®FPL1-B22			

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