

TECHNICAL  
OVERVIEW

# N9311X RF and Microwave Accessory Kit for Low-cost Handheld and Benchtop Solutions

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N9311X RF and Microwave Accessory Kit complements the Keysight Technologies, Inc. low-cost handheld and benchtop solutions (N934xC/N9340B/N9330B/N9310A/N9320B/N9000A).

These accessories provide you with a complete solution for your measurement needs.



## Antenna

Antenna	Frequency range	Antenna gain	Weight	Dimension	Other information
N9311x-500	70 to 1000 MHz	N/A	65 g	113.5 cm (full length), 19.5 cm (retracted), 10 stages	180 degrees tilt angle adjustable telescopic whip antenna, shipped with type N(m) to type BNC(f) adapter, 50 Ω
N9311x-501	700 to 2500 MHz	N/A	70 g	210 x 20 mm	Omni-directional, shipped with type N(m) to type SMA(f) adapter, 50 Ω
N9311x-504 <sup>1</sup>	700 MHz to 4 GHz	4 dBi	270 g	340 x 200 x 25 mm	Logarithmic-periodic, 50 Ω
N9311x-508 <sup>1</sup>	680 MHz to 8 GHz	5 dBi	250 g	340 x 200 x 25 mm	Logarithmic-periodic, 50 Ω
N9311x-518 <sup>1</sup>	680 MHz to 18 GHz	5 dBi	250 g	340 x 200 x 25 mm	Logarithmic-periodic, 50 Ω

1. N9311x-504/508/518 shipping package includes: Antenna, aluminum design carrycase, detachable pistol grip with "miniature tripod" mode, and type N to type SMA toolset



## Bandpass Filter

Bandpass filter	3 dB passband	Rejection	Insertion loss (nominal)	VSWR (nominal)	Impedance
N9311X-550	814 to 850 MHz	≥36 dBc @ 740 MHz ≥36 dBc @ 915 MHz	≤ 0.5 dB	≤1.5	50 Ω
N9311X-551	880 to 915 MHz	≥35 dBc @ 862 MHz ≥35 dBc @ 932 MHz	≤ 1 dB	≤1.5	50 Ω
N9311X-552	1707.5 to 1787.5MHz	≥35 dBc @ 1550 MHz ≥35 dBc @ 1925 MHz	≤ 0.4 dB	≤1.5	50 Ω
N9311X-553	1845 to 1915 MHz	≥35 dBc @ 1770 MHz ≥35 dBc @ 1986 MHz	≤ 0.6 dB	≤1.5	50 Ω
N9311X-554	1910 to 1990 MHz	≥35 dBc @ 1825 MHz ≥35 dBc @ 2070 MHz	≤ 0.6 dB	≤1.5	50 Ω



## Cable

N9311X-580	N9311X-581	N9311X-582	N9311X-583	N9311X-585	N9311X-586
Phase stable, 1.5 m, type N(m) to N(m), DC to 18 GHz, 50 Ω	Phase stable, 3.0 m, type N(m) to N(m), DC to 18 GHz, 50 Ω	1.5 m, type SMA(m) to SMA(m), DC to 8 GHz, 50 Ω	1.5 m, type BNC(m) to BNC(m), DC to 1 GHz, 50 Ω	Phase stable, 1.5 m, type N(m) to DIN(f), DC to 18 GHz, 50 Ω	Phase stable, 1.5 m, type N(m) to N(f), DC to 18 GHz, 50 Ω

## Adapter

N9311X-545	N9311X-541	N9311X-540	N9311X-543	N9311X-542	N9311X-544	N9311X-546	N9311X-547
Type N(f) to SMA(m), DC to 12.4 GHz, 50 Ω	Type N(m) to SMA(f), DC to 12.4 GHz, 50 Ω	Type N(m) to BNC(f), DC to 2 GHz, 50 Ω	Type N(f) to BNC(m), DC to 4 GHz, 50 Ω	Type N(f) to 7/16 DIN(f), DC to 7.5 GHz, 50 Ω	Type N(f) to 7/16 DIN(m), DC to 7.5 GHz, 50 Ω	Type N(f) to N(f), DC to 18 GHz, 50 Ω	Type N(m) to 7/16 DIN(f), DC to 7.5 GHz, 50 Ω



## Attenuator



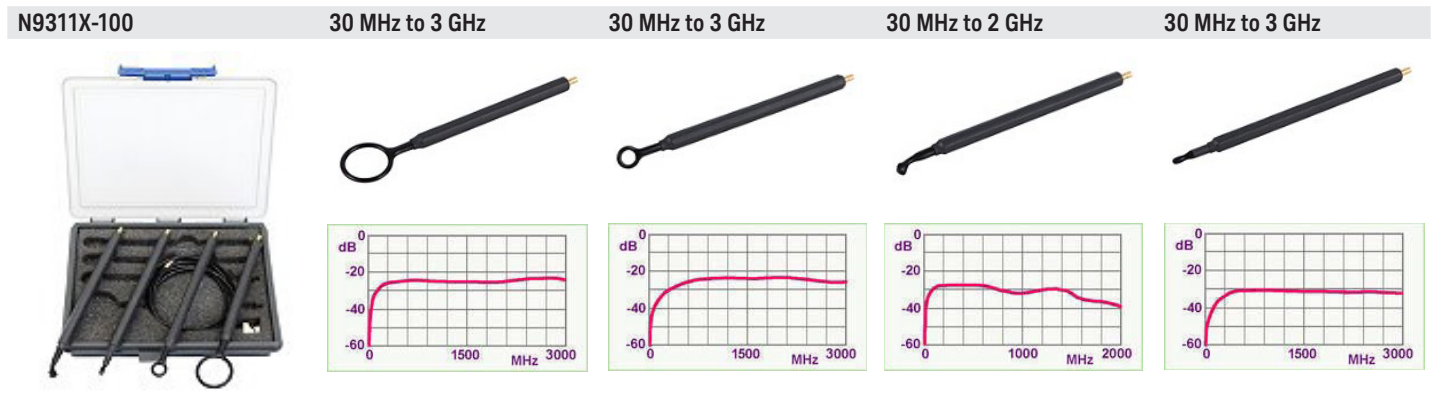
N9311X-561

Attenuator	Attenuation (nominal)	Port	VSWR	Power rating	Length	Weight	Impedance
N9311X-560	40 dB	N(m)toN(f)	DC to 4.0 GHz: 1.15 4.0 to 8.5 GHz: 1.2	50 watts average	111.76mm(4.37 inch)	0.28 kg/10 oz	50 Ω
N9311X-561	40 dB	N(m)toN(f)	DC to 4.0 GHz: 1.15 4.0 to 8.5 GHz: 1.2	10 watts average	67.3 mm (2.65 inch)	0.085 kg/3oz	50 Ω
N9311X-562	40 dB	N(m)toN(f)	DC to 4.0 GHz: 1.15 4.0 to 8.5 GHz: 1.2	100 watts average	112.01mm(4.41 inch)	1.5 kg/3.3 lb	50 Ω

## Calibrator

Calibrator	Type	Frequency range	Directivity (nominal)	Impedance	Connector	Other
N9311x-201	Mechanical calibrator	DC to 7 GHz	42 dB	50 Ω	N(m)	3-in-1 OSL

## Close Field Probe Set



## Keysight low-cost Handheld and Bench Instruments

Title	Website
N934xC/N9340B Handheld Spectrum Analyzer(HSA)	<a href="http://www.keysight.com/find/hsa">www.keysight.com/find/hsa</a>
N9330B Handheld Cable and Antenna Tester	<a href="http://www.keysight.com/find/n9330">www.keysight.com/find/n9330</a>
N9000A CXA Signal Analyzer	<a href="http://www.keysight.com/find/cxa">www.keysight.com/find/cxa</a>
N9310A RF Signal Generator	<a href="http://www.keysight.com/find/n9310a">www.keysight.com/find/n9310a</a>
N9320B RF Spectrum Analyzer	<a href="http://www.keysight.com/find/n9320b">www.keysight.com/find/n9320b</a>

Learn more at: [www.keysight.com](http://www.keysight.com)

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