

N7020A Probe Specifications and Characteristics

N7020A Environmental Specifications

Attribute	Specification	Specification
	With N7021A Pigtail Cable / N7022A Main Cable	With N7023A / N7032A / N7033A Browser
Use	For indoor use only	
Temperature	Operating: -10 °C to +55 °C (probe pod) Non-operating: -40 °C to +70 °C (probe pod)	
	Operating: -40 °C to +85 °C (main cable/pigtail cable) Non-operating: -40 °C to +85 °C (main cable/pigtail cable)	Operating: -10 °C to +55 °C (browser) Non-operating: -40 °C to +70 °C (browser)
Altitude	Operating: 3,000 m (9,842 feet) Non-operating: 15,300 m (50,196 feet)	Operating: 3,000 m (9,842 feet) Non-operating: 15,300 m (50,196 feet)
Humidity	Operating: 25 – 85% room humidity Non-operating: 25 – 85% room humidity	Operating: 80% room humidity for temperatures up to 31 °C, decreasing linearly to 40% at 50 °C Non-operating: 95% room humidity for temperatures up to 40 °C
Pollution Degree	Pollution Degree 2	

NOTE

A few electrical specifications and characteristics of the probe vary based on the connection mechanism used to connect the probe to DUT. This variation is listed in the table below.

N7020A Electrical Characteristics and Specifications

Attribute	Characteristics (based on probe's connection configuration)				
	With N7022A Main Cable	With N7021A Pigtail Cable & N7022A Main Cable	With N7023A Browser	With N7032A Browser & N7022A Main Cable	With N7033A Browser & N7022A Main Cable
Probe Bandwidth (–3 dB)	2 GHz	2 GHz	350 MHz (using the included ground spring)	2 GHz	2 GHz
Maximum Input Voltage (non-destructive)			±30V peak input (mains isolated)		
Attenuation Ratio			1.1:1		
Offset Range			± 24V		
Input Impedance at DC *			50 kΩ ±2%		
Active Signal Range			± 850 mV (about offset voltage)		
Probe Noise (at 2 GHz)		10% increase in the noise of the connected oscilloscope			
Output Termination			50 Ω scope input		
Probe Type			Single Ended		

* Warranted specification.All other characteristics are typical.

Mechanical Characteristics of N7020A Probe and Browsers

Description	N7020A Probe	N7023A Browser	N7032A Browser	N7033A Browser
Weight	50 g	26 g	10 g	10 g

N7020A Probe, Browsers, and Cables Dimensions

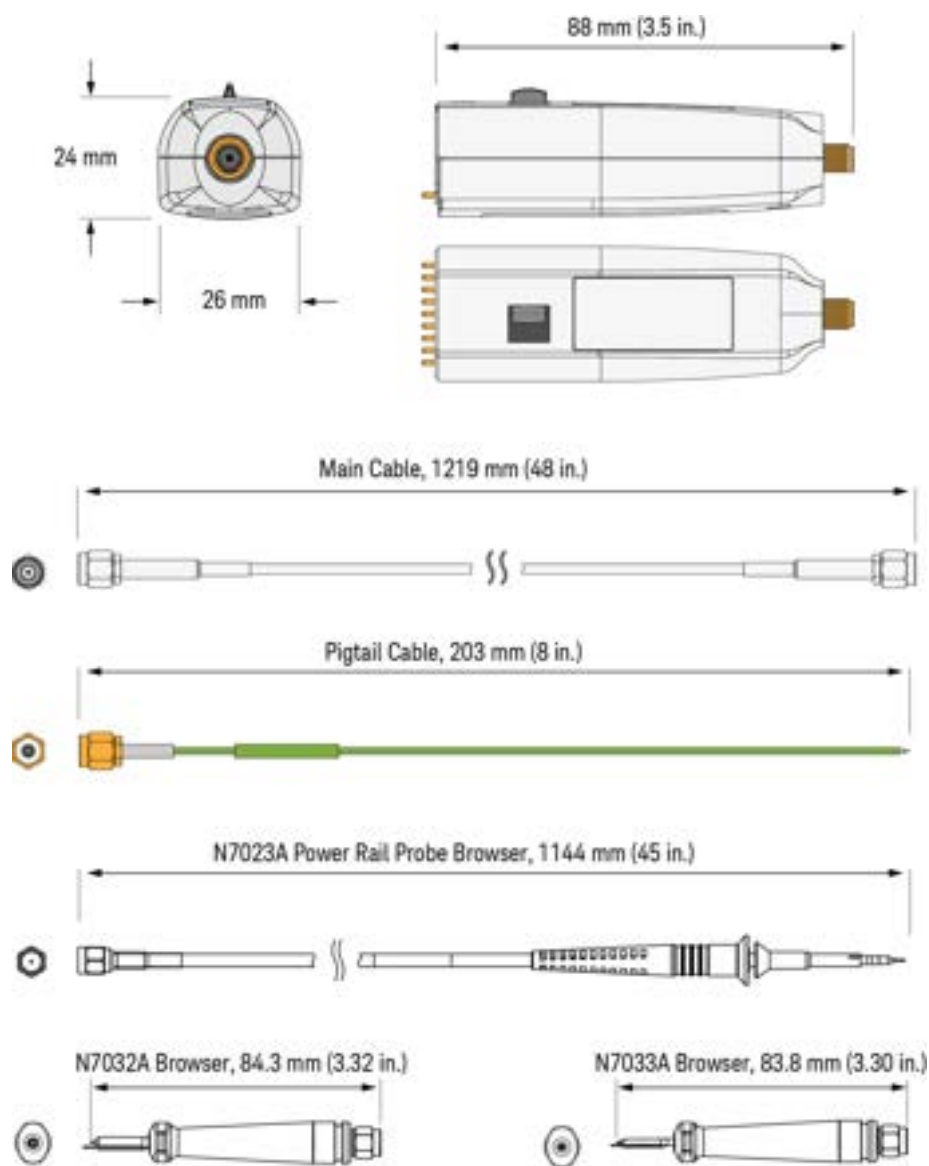


Figure 5 N7020A Probe, Browsers, and Accessory Cables Dimensions

Oscilloscope Compatibility

NOTE

The N7020A and N7024A probes are designed for Keysight oscilloscopes with 50Ω AutoProbe-interface channel inputs.

Compatible Oscilloscopes for the N7020A and N7024A Probes

Compatible Oscilloscopes for the N7020A Probe		Compatible Oscilloscopes for the N7024A Probe	
Oscilloscopes	Required Firmware Version	Infiniium Oscilloscopes	Required Firmware Version
EXR-Series	11.06.00401 or higher	EXR-Series	11.06.00401 or higher
MXR-Series	11.00 or higher	MXR-Series	11.00 or higher
S-Series	≥ 5.20	S-Series	≥ 06.20.00803
9000 Series	≥ 5.20	V-Series (with N5442A adapter)	
6000 X-Series	≥ 6.10	Z-Series (with N5442A adapter)	
4000 X-Series	≥ 4.00	90000X/Q-Series	
3000T X-Series	≥ 4.00	UXR-Series 3.5 mm models (with N5442A adapter)	
3000A-X-Series	≥ 2.39	UXR-Series 1 and 1.85 mm models (with N5442A + N2852A adapters)	≥ 11.15.00001
		9000	≥ 6.50.00906
		90000A	

Is Your Oscilloscope Software Up-to-Date? Keysight periodically releases software updates to support your probe, fix known defects, and incorporate product enhancements. To download the latest firmware, go to www.keysight.com and search for your oscilloscope’s topic. Click on the “Drivers, Firmware & Software” tab.