TELEDYNE LECROY
Everywhereyoulook™

RP4030 Active Voltage Rail Probe



Key Features

4 GHz Bandwidth

±30V Offset Capability

±800mV Dynamic Range

50 kΩ DC Input Impedance

1.2x Attenuation
(Low Additive Noise, ~5%)

MCX terminated cable with wide variety of connections:

- **Solder-in (4 GHz)**
- **Coaxial Cable to U.FL receptacle (3 GHz)**
- **MCX PCB Mount (4 GHz)**
- **Browser (350 MHz)**

ProBus Interface

The RP4030 is designed specifically to probe a 50Ω DC power/voltage rail. The probe has large built-in offset, low attenuation (noise), and high DC input impedance. Built-in offset and low attenuation permit the power/voltage rail to be offset in the oscilloscope by its mean DC voltage with high oscilloscope gain (sensitivity) to achieve a noise-free view of small signal variations. The high DC input impedance eliminates loading of the DC rail.

Large Offset Range

Permits the DC signal to be displayed in the vertical center of the oscilloscope grid with a high-sensitivity gain setting.

Low Attenuation and Noise

The probe attenuation is a nominal 1.2x coupled to the oscilloscope at DC 50 Ω. This keeps additive noise to a minimum, and makes it exceptionally useful with High Definition oscilloscopes for lowest noise at highest sensitivity gain settings.

High DC Input Impedance

50 kΩ input impedance at DC effectively eliminates probe loading on the DC power/voltage rail and provides for more accurate measurements and signal fidelity.

4 GHz of Bandwidth

Provides maximum bandwidth for probing near the CPU, and the perfect match with the 4 GHz, 10 bit HDO9404 when making power integrity measurements.

Wide Assortment of Tips and Leads

The RP4030 is supplied standard with solder-in and coaxial cables with MCX and U.FL PCB receptacle mounts. A browser tip is optionally available. Additional receptacles or leads may be purchased as accessories and left connected in circuit for easy connection of different signals during different test or validation stages.

SPECIFICATIONS & ORDERING INFORMATION

Specifications

Electrical Characteristics

Bandwidth	4 GHz (guaranteed, MCX receptacle) 4 GHz (typical, solder-in lead) 3 GHz (typical, U.FL cable + receptacle) 350 MHz (typical, browser)
Rise Time (10-90%)	110 ps (typical, MCX receptacle or solder-in lead)
Input Capacitance	0.1 uF (in series with 50Ω)
DC Input Resistance	50 kΩ
Offset Range	±30V
Attenuation	1.2x
Input Dynamic Range	±800 mV
Non-destruct Voltage	±50V
Noise	~5% additive to oscilloscope noise
Oscilloscope Termination	DC 50Ω

Environmental

Operating Temperature Range	0 to 50 ºC
Non-operating Temperature Range	-40 to +70 ºC
Humidity	5% to 80% RH (non-condensing) up to 30 ºC, decreasing linearly to to 45% RH at 50 ºC
Operating Altitude	3000 meters maximum

Physical

RP4030	**Probe:** 38.1 mm W x 15.9mm H x 73mm L (1-1/2″ x 5/8″ x 2-7/8″) **SMA to MCX Cable:** 914mm L (36″) **MCX to Solder-in Lead:** 191mm (7-1/2″) usable length **MCX to U.FL Plug Coaxial Cable:** 102mm (4″) usable length
RP4000-BROWSER	11.9mm W x 9.5mm H x 38mm L (15/32″ x 3/8″ x 1-1/2″) **SMA to SMA Cable:** 1m (39-3/8″) usable length

Other

Oscilloscope Interface	Teledyne LeCroy ProBus
Software Requirements	Teledyne LeCroy MAUI 8.2.1.1 or higher
Weight	119 g (0.26 lb)

Ordering Information

Product Description	Product Code
Power/Voltage Rail Probe 4 GHz, 1.2x, ±30V offset, ±800mV dynamic range	RP4030
Includes Qty. 1 ProBus compatible probe offset amplifier with 50 kΩ DC input impedance and SMA input connection for provided 0.9m SMA to MCX extension cable. Also supplied are Qty. 3 MCX solder-in leads, Qty. 3 MCX PCB Mounts, Qty. 3 MCX to U.FL coaxial cables, Qty. 5 U.FL PCB Mounts, Qty. 1 MCX to SMA adapter, and soft carrying case. Browser tip sold separately.	
350 MHz Browser Tip Accessory Includes 0 Ω (1x), 450 Ω (10x) and 950 Ω (20x) tips.	RP4000-BROWSER



Accessories and Consumables

Qty. 3 MCX 4 GHz solder-in leads	RP4000-MCX-LEAD-SI
Qty. 10 MCX PCB mount receptacle	RP4000-MCX-PCBMOUNT
Qty. 3 MCX to U.FL 3 GHz ultra-mini coax cable	RP4000-MCX-CABLE-UFL
Qty. 10 U.FL PCB mount receptacles	RP4000-UFL-PCBMOUNT

Customer Service

Teledyne LeCroy oscilloscopes and probes are designed, built, and tested to ensure high reliability. In the unlikely event you experience difficulties, our digital oscilloscopes are fully warranted for three years and our probes are warranted for one year. This warranty includes:

- No charge for return shipping
- Long-term 7-year support
- Upgrade to latest software at no charge

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**Local sales offices are located throughout the world.
Visit our website to find the most convenient location.**

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