RIGOL

User's Guide

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RP1018H

RP1018H High Voltage Probe

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1. Specification

Model	RP1018H
Division Ratio	1000:1
Input Resistance	200MΩ
Input Capacitor	1.5 PF
Max. Input: DC+AC peak	18kV CAT II
Max. Input: AC RMS.	12kV CAT II
Max. Loading Current	90uA
Bandwidth	DC~150MHz
Rise Time	2.4 ns
Signal / Noise	> 60dB at 1kHz ; > 50dB at 1MHz
DCV Accuracy	≤ 3% Full Range
ACV Accuracy	≤ 3% at 1 kHz
Temp. Coefficient	≤ 200 PPM / ℃
Compensation Range	10PF ~ 35PF
Safety	Meets EN61010-031 CAT II
Cable Length	2M ± 0.2M
Operation Temperature Range	-10 ~ 55℃
Humidity	85% RH or less (at 35℃)
Storage Temperature Range	-20 ~ 70℃
Color: Handel/Body	Black / Yellow
Weight / Volume	460g /80(W) x 80(H) X 320(L) mm

2. Safety Precautions

Thank you for purchasing RP1018H high voltage probe. High voltage probe can prevent high voltage testers from subjecting to unexpected shocks when doing high voltage measurement work. Before using the high voltage probe, the operator must read and fully understand the safety rules.
In addition, this high voltage probe only for the person who are trained, experienced, or otherwise qualified to recognize hazardous situations and who trained in the safety precautions that necessary to avoid possible injury when using such a device.

Do not work alone when working with high voltage circuits.
For your own safety, inspect the probes for cracks and frayed or broken leads before each use. If defects are noted, DO NOT USE the probe.
Hands, shoes, floor and work bench must be dry. Avoid making measurements under humid, damp or other environmental conditions that might affect the safety of the measurement situation. If possible, always turn the high voltage source off before connection or disconnection the probe.
The probe body should be kept clean and free of any conductive contamination. The probe is for indoor use only.

3. Operation

1) Connect the divider probe common lead (alligator clip) to a good earth ground or reliable ground.
2) Connect the BNC connector to the BNC input of your oscilloscope.
3) Select the desired range of your oscilloscope.



NOTE
Please turn the high voltage source off before making any connections.

4. Compensation Adjustment

Connect the probe to the oscilloscope, and input a 200Hz square wave to the probe tip. After that adjust the oscilloscope controls to display a few cycles of the waveform. Adjust the trimmer located in the BNC plug for a flat topped square wave.

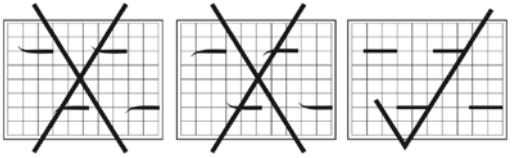
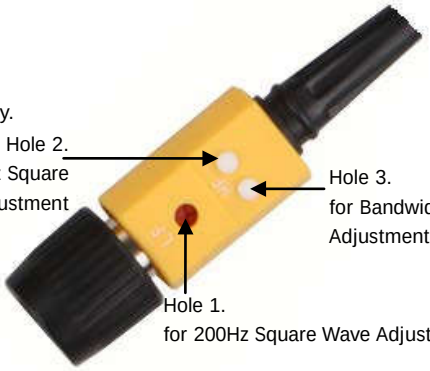


Illustration of 200Hz square wave adjustment

Adjust the frequency response of the probe to match your oscilloscope by the adjust bar attached only.



CAUTION

1) Please use function signal generator to output 20 Vp-p, 200 Hz square waveform.
2) Non-professionals do not adjust the Hole 2 and Hole 3.
3) This product is already adjusting Hole 2 and Hole 3. Please feel free to operation.
4) Use the adjust bar attached only.
5) When the measuring frequency was 40MHz up, you must replace the long earth lead with the Alligator Clip (BP-276N-D) to obtain a best earth and the best frequency response.

For 40MHz up
Measuring Frequency



5. Warning

1) Do not attempt to take the ground of test equipment away from the ground terminal.
   The ground connection is critical to the safety operation of the probe. Failure to make this connection may result in personal injury or damage to the probe or oscilloscope. You must be sure to connect the ground before the probe tip comes into contacting with the high voltage. And the ground connection must not be removed until the probe tip has been taken away from the high voltage source.
2) Do not connect the ground clip to the high voltage source or the probe tip to the ground for any reason.
3) Before turning the high voltage on, make sure that no part of your body is in contact with the device.
4) Remembering that the voltage being measured is 1000 times greater than the

voltmeter reading.

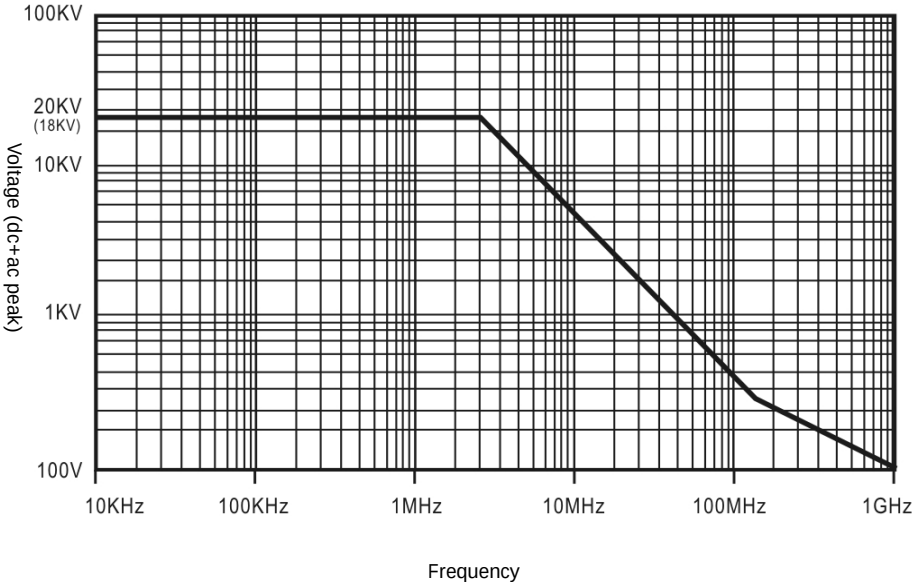
5) Disconnect the probe tip from the high voltage source before removing the ground clip.

6. Cleaning

Clean only the exterior probe body and cables. Use a soft cotton cloth lightly moistened with alcohol and water. Do not allow any portion of the probe to submerge in the liquid. Dry the probe thoroughly before measuring voltage.
Do not place the probe into the corrosive solvents or fumes as these will cause deterioration to the probe and cables.

7. Voltage Derating Curve

RP1018H (18kV:3MHz / 300V:150MHz / 100V:1GHz)



8. Accessories

Test CRT for H.V.



Adjust bar



Carrying Box



Contact Us

If you have any problem or requirement when using our products or this manual, please contact **RIGOL**.

E-mail: service@rigol.com

Websites: www.rigol.com