

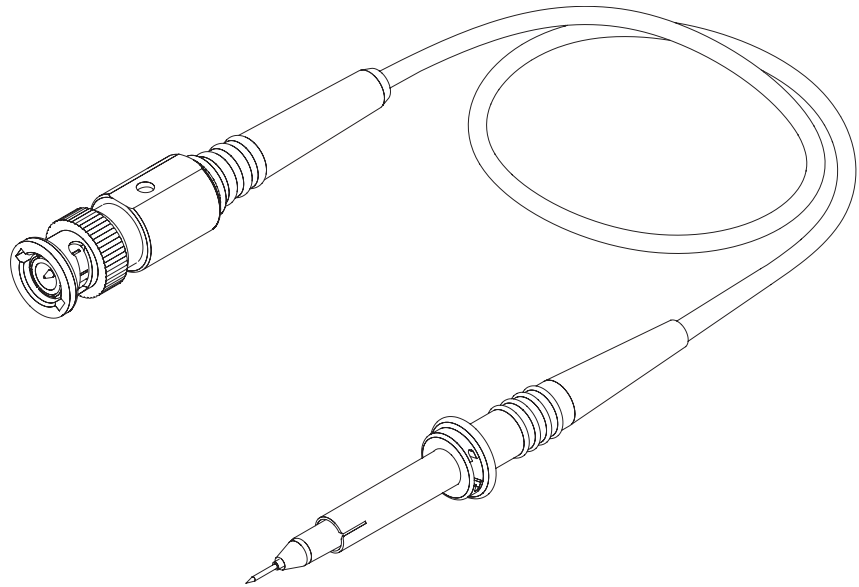


PMM 511A

High impedance passive probe

Features:

- CeramCore™ hybrid probe
- Coaxial design
- Interchangeable spring contact tips 0.8 and 0.38 mm diameter
- New IC contacting system for 0.8 to 1.27 mm pitch



The PMM 511A is a 500 MHz, miniature 10:1 passive probe designed for instruments having 1 M Ω input resistance. This probe is recommended for high performance probing applications and is adjustable for low and high frequencies. The probe is rated with 300 V CAT II maximum input voltage and complies with latest safety standards. Like every PMK passive probe the PMM 511A features CeramCore™ technology. The probe's entire core is made of a high quality ceramic hybrid. Pure coaxial design and laser trimmed resistors ensure highest signal fidelity along the signal path offering high bandwidth and fast risetimes for accurate impulse measurements. All passive probes are equipped with PMKs signature spring loaded, needle sharp tips to support precise and safe measurements minimizing the risk of slipping off the board and produce a short circuit. Various types of tips are available. Besides the spring contact tips there is also a solid tip available at the users choice. Probe tips are interchangeable and can be replaced easily. Basic probe accessories and replacement tips are provided within the scope of delivery or can be purchased separately. See this datasheet and corresponding documents for further details.

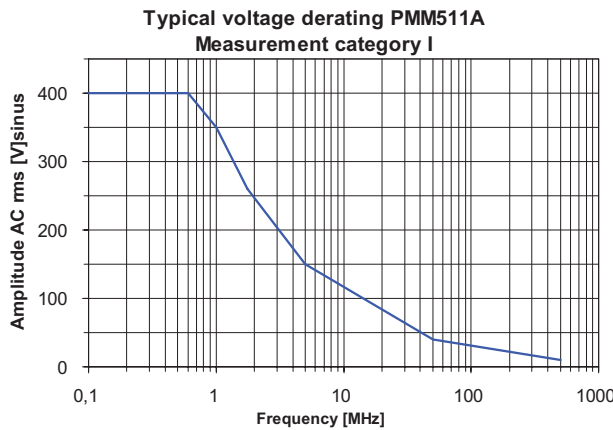
Thank you for your interest in our product!

This datasheet supersedes all previously published material. Specifications that are defined typical are not guaranteed and are published as general information to the user. The instrument should have warmed up for at least 20 minutes and the environmental conditions must not exceed the specified limits of the probe. Note that specifications are subject to change without notice.

Electrical specifications

| | | |
|---|------------------------------|----------------------------|
| <i>Attenuation ratio</i> ⁽¹⁾ | 10:1 | ± 2 % at DC |
| <i>Voltage coefficient</i> | 0.0025 % / V | (typical) |
| <i>System bandwidth</i> | 500 MHz | (-3 dB) |
| <i>System risetime</i> | 0.7 nsec | (10 % – 90 %) (typical) |
| <i>Maximum rated input voltage</i> | | |
| <i>Measurement category I:</i> | 400 V rms | |
| | 1250 V transient overvoltage | |
| <i>Measurement category II:</i> | 300 V rms CAT II | |
| <i>Pollution degree</i> | 2 | |

Voltage derating



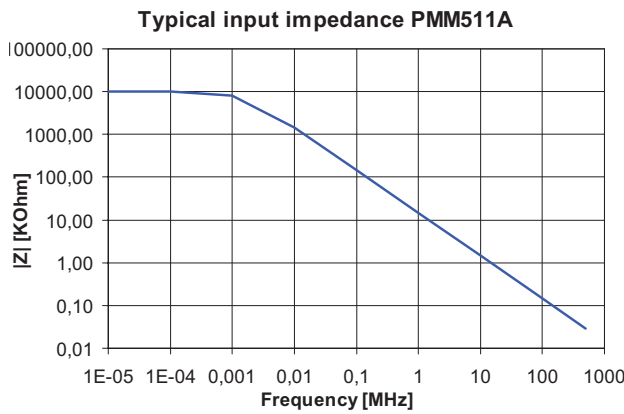
Note that the max. input voltage rating of the probe decreases as the frequency of the applied signal increases.

(1) Connect to oscilloscope with an input impedance of 1 MΩ ± 1 %.

Electrical Characteristics

| | | |
|---|---------------|-----------|
| <i>Input resistance (system)</i> | 10 MΩ | ± 1 % |
| <i>Input capacitance (system)</i> | 11 pF | (typical) |
| <i>Compensation range</i> | 10 pF – 20 pF | (typical) |
| <i>Input coupling of the measuring instrument</i> | 1 MΩ AC / DC | |

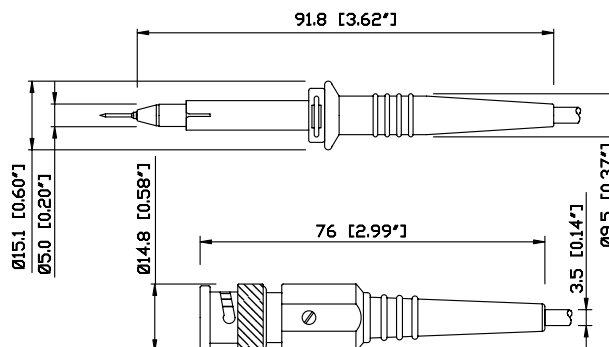
Input impedance



Note that the input impedance of the probe decreases as the frequency of the applied signal increases.

Mechanical characteristics

| | |
|---------------------|-------|
| Weight (probe only) | 46 g |
| Cable length | 1.2 m |
| Probe tip diameter | 5 mm |





Environmental specifications

| | | |
|----------------------------------|---------------|---|
| <i>Altitude</i> | operating | up to 2000 m |
| | non-operating | up to 15000 m |
| <i>Temperature range</i> | operating | 0 °C to +50 °C |
| | non-operating | -40 °C to +71 °C |
| <i>Maximum relative humidity</i> | operating | 80 % relative humidity for temperatures up to +31 °C, decreasing linearly to 40 % at +50 °C |

Declaration of conformity

The manufacturer declares the conformity of his products with the actual required safety standards in accordance with the Low Voltage Directive (LVD) 73/23/EEC and amendment 93/68/EEC:

CEI/IEC 61010-031:2002

Safety requirements for electrical equipment for measurement, control and laboratory use.

Part 031:

Safety requirements for hand-held probe assemblies for electrical measurement and test.

WEEE/ RoHS directives

PMK electronic products are classified within the WEEE/ RoHS* category list as monitoring and control equipment (category 9). Category 9 products are exempt from the restrictions under the scope of the RoHS directive.

Your help and efforts are required to protect and keep clean our environment. Therefore return any electronic product at the end of its life either to the manufacturer or take care of separate WEEE collection and professional WEEE treatment yourself. Do not dispose as unsorted municipal waste!

* EC Directives:

| | | |
|---------------------------|---|---|
| WEEE Directive 2002/96/EC | – | Waste Electrical and Electronic Equipment |
| RoHS Directive 2002/95/EC | – | Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment |



Scope of delivery PMM 511A Order-No. 855-511-A00

- Probe
- BNC adapter 5.0
- Ground blade 5.0
- Ground spring 5.0
- Ground lead 11 cm
- IC-Caps 0.8 to 1.27 mm pitch
- Instruction manual
- Insulating cap 5.0
- Protection cap 5.0
- Spring tips 0.8 mm & 0.38 mm
- Solid tip 0.8 mm
- Sprung hook 5.0
- Adjustment tool T
- 2 footer positioner
- Coding rings (Set) 3 x 4 colours

Safety information

To avoid personal injury and to prevent fire or damage to this product or products connected to it, review and comply with the safety informations stated in the manual before using this product. Be aware that if you use this probe assembly in a manner not specified the protection this product provides may be impaired.

Only qualified personnel should use this probe assembly.

Manufacturer

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