



**Probing Solutions.
Made in Germany.**

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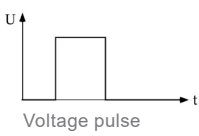
PMM SERIES

High Impedance 300 V Passive Probes up to 500 MHz

Datasheet



Specifications

	PMM 511A / 511A-RO	PMM 512A / 512A-RO	PMM 513A / 513A-RO	PMM 515A / 515-RO
Order number without Read-Out	855-511-A00	855-512-A00	855-513-A00	855-515-A00
Order number with Read-Out	855-511-A01	855-512-A01	855-513-A01	855-515-A01
Electrical Specifications				
Attenuation Ratio (±2 % at DC) (¹)	10:1	10:1	10:1	10:1
System Bandwidth (-3 dB)	500MHz	380MHz	250MHz	175MHz
Rise time (10 % - 90 %)	0.7ns	0.95ns	1.4ns	2ns
Voltage Coefficient (at DC)	0.00025 % / V	0.00025 % / V	0.00025 % / V	0.00025 % / V
Input Resistance (System) (± 1 %)	10MΩ	10MΩ	10MΩ	10MΩ
Input Capacitance (System)	11pF	13.5pF	18pF	23pF
Compensation Range	7pF - 25pF	7pF - 25pF	7pF - 25pF	7pF - 25pF
Input Coupling of the Measuring Instrument	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC	1 MΩ AC / DC
Maximum Rated Input Voltages, CAT II, CAT III (²)				
Pollution Degree	2	2	2	2
Measurement Category II	300V CAT II	300V CAT II	300V CAT II	300V CAT II
Maximum Rated Input Voltages, No Measurement Category, not in CAT II, III, IV (²)				
Pollution Degree	2	2	2	2
No Measurement Category (²)	400V / 1650V peak	400V / 1650V peak	400V / 1650V peak	400V / 1650V peak
Maximum Pulse Rating, No Measurement Category, not in CAT II, III, IV (²)				
Upulse (³)	Upulse 1650V (Step 0V to 1650V) Voltage pulse			

Mechanical Specifications				
Weight (Probe only)	45g	57g	75g	105g
Cable Length	1.2m	2m	3m	5m
Probe Tip Diameter	5 mm	5mm	5 mm	5mm

Environmental Specifications		
Altitude	operating	up to 2000m
	non-operating	up to 15000m
Temperature Range	operating	0 °C to +50 °C
	non-operating	-40 °C to +71 °C
Maximum Relative Humidity	operating	80 % relative humidity for temperatures up to +31 °C, decreasing linearly to 40 % at +50 °C
	non-operating	95 % relative humidity for temperatures up to +40 °C

This product comes with 2 years warranty.
Specifications that are not marked as guaranteed are typical.

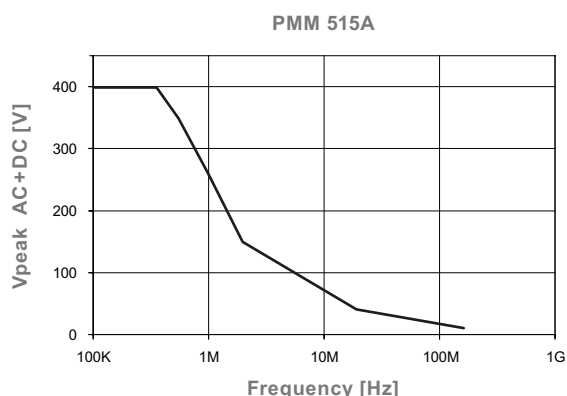
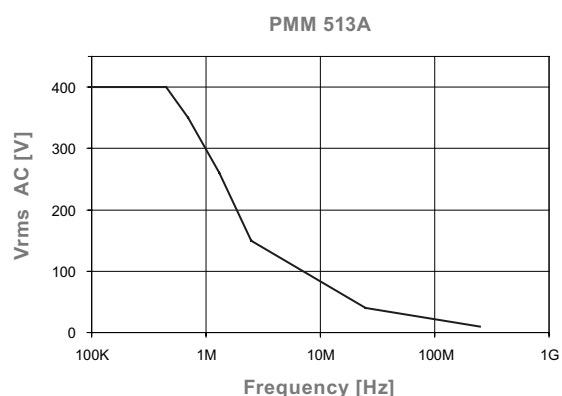
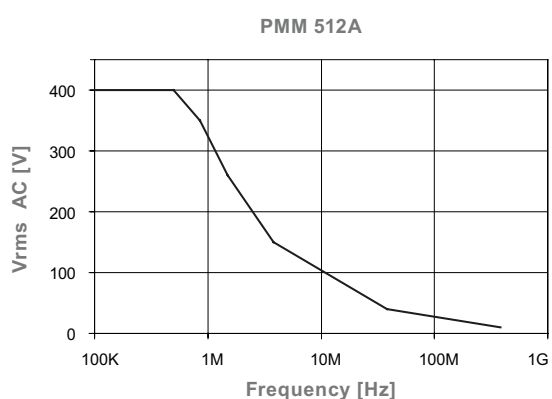
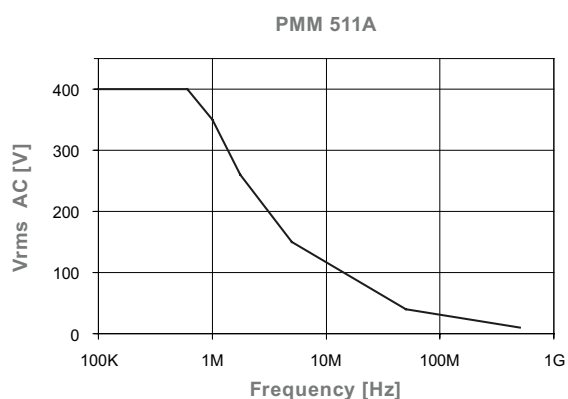
(1) Connected to oscilloscope with an input impedance of 1 MΩ ± 1 %.
(2) As defined in IEC 61010-031.
(3) No overshoot permitted.

Typical Voltage Derating



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

The charts given here are valid for no measurement category, not in CAT II, III, IV (¹).

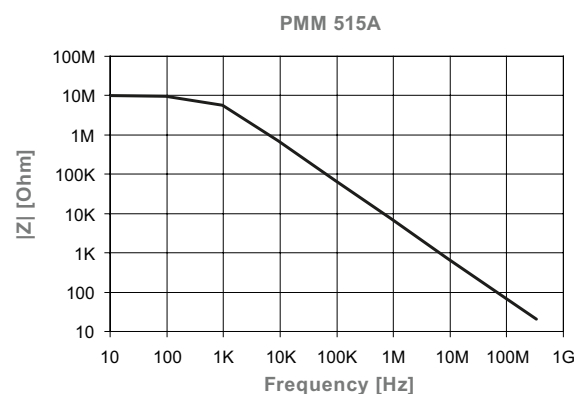
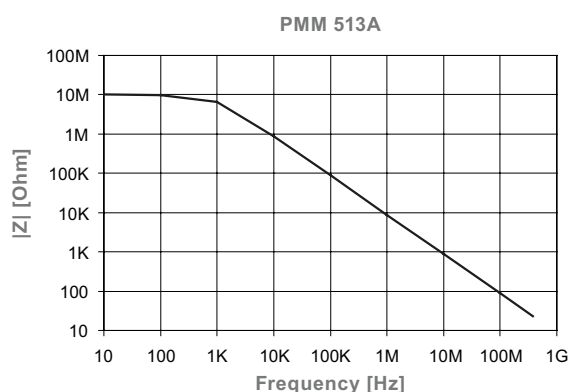
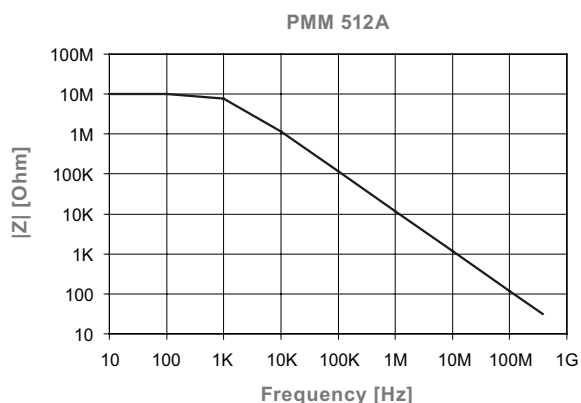
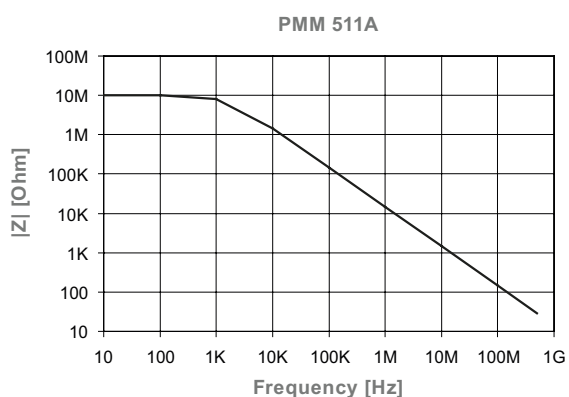


Typical Input Impedance



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

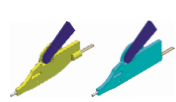
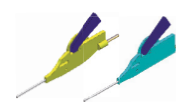
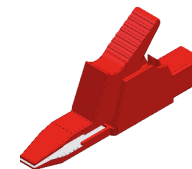
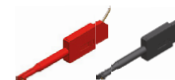
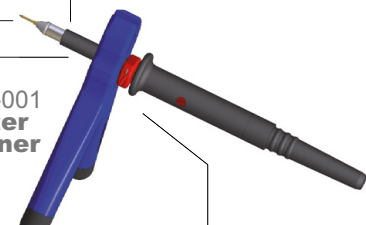
The charts given here are valid for no measurement category, not in CAT II, III, IV (¹).



(¹) As defined in IEC 61010-031. See in manual.

Probe Accessories

The parts supplied are **highlighted**, see also "Scope of Delivery".

 890-500-00X QFP IC-Clip short down to 0.5 mm pitch (X : 4 = yellow; 5 = green)	 890-500-13X QFP IC-Clip 13 mm long down to 0.5 mm pitch (X : 4 = yellow; 5 = green)	 972405101 / 972405100 Safety Alligator Clip (red / black)	 018-292-063 IC-cap 5.0 0.8 mm pitch (grey)				
 P25-2 / P25-0 Pico Hook™ (red / black)	 890-320-020 / 890-320-000 Sprung Hook 5.0 (red / black)	 890-220-020 / 890-220-000 Flexible Adapter 5.0 to 4 mm Safety Banana Plug (red / black)	 018-292-064 IC-cap 5.0 1.0 mm pitch (brown)				
			 018-292-065 IC-Cap 5.0 1.27 mm pitch (black)				
 890-520-710 Dual Adapter 5.0 to Open Leads	 890-520-701 Dual Adapter 5.0 to 0.8 mm Socket	 890-510-700 Adapter 5.0 to 0.8 mm Socket	 890-202-000 Flexible Adapter 5.0 to 2 mm Banana Plug	 890-210-000 Flexible Adapter 5.0 to 4 mm Banana Plug			
 890-100-150 10 self adhesive Cu Pads (2 x 2 cm)	 890-501-380 5x Spring Tip 0.38 mm	 891-005-803 5x Spring Tip 0.8 mm	 891-005-011 5x Solid Tip 0.8 mm	 018-292-02 Protection Cap 5.0 (black)			
 018-291-102 Ground Blade 5.0	 890-400-003 Ground Spring 5.0	 893-250-001 2 Footer positioner	 018-292-007 Adjustment Tool T	 890-010-912 Set Coding Rings 3x4 colors			
 890-400-013 Ground Lead 11 cm to 0.8 mm plug	 890-400-011 Ground Lead 11 cm to Miniclip	 890-400-102 Ground Lead 22 cm to 2 mm Banana Plug	 890-400-104 Ground Lead 22 cm to 4 mm Banana Plug	 890-400-015 Ground Lead 15 cm	 890-400-000 Ground Lead 22 cm	 890-450-220 HF compensated Ground Lead 22 cm	 890-400-D00 Ground Lead differential 22 cm

Items	Qty	Items	Qty
Adjustment Tool T	1	Instruction Manual	1
BNC Adapter 5.0	1	Insulating Cap 5.0	1
Coding Rings (set) 3x4 colors	1	Probe PMM	1
2 Footer Positioner	1	Protection Cap 5.0 ⁽¹⁾	1
Ground-Blade 5.0	1	Self adhesive cu Pad (2 x 2 cm)	1
Ground Lead 15cm	1	Solid Tip 0.8mm	1
Ground Spring 5.0	1	Spring Tip 0.8mm ⁽²⁾	1
IC-Cap 5.0 / 0.8mm pitch; grey	1	Spring Tip 0.38mm	1
IC-Cap 5.0 / 1.0mm pitch; brown	1	Sprung Hook 5.0	2
IC-Cap 5.0 / 1.27mm pitch; black	1	-	-

(2) Installed in probe.

Notes

Manufacturer

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