COM-POWER CORPORATION The EMCShop.com

Near Field Probe Set

PS-400

Features

Complete Solution - Includes E and H field probes

Locate Noise Source - Down to a pin with the fine tip

Lightweight - Easy to use and handle

Small Size - Allows easy access to corners

Sensitive to Tip Position - Ease of pinpointing source

Immune to Hand Position - For repeatable results

Optional preamplifier

Description

The PS-400 is a Near Field Probe set consist three probes and a custom storage case. Performance and ease of use were designed into this product. The unique design allows easy access for tight or hard to reach places while reducing the effect of hand position or cable placement.

The fine tip probe is a precision E-field probe that features the ability to singularly identify a problem trace or pin. The fine tip probe is designed to be extremely sensitive to distance from the source which allows easy discrimination between traces on a PCB. The unique patented design allows measurement on individual traces as narrow as 3 mils.

The broadband probe is designed to identify E-fields over a broad frequency range.

The H-field probe's magnetic loop design makes it ideal for isolating sources of magnetic noise. The shielded loop construction allows measurement to minimize the effect of electrical fields.

Application

The PS-400 Near Field Probe Set is designed to assist in troubleshooting EMI problems both at the board level and at the component level. It is used to detect radiation from cables, cases, traces and ICs.

Typically the broadband probe is used to locate the general area of emission. Then the tip probe is used to isolate the source to a specific trace or pin. Further analysis can be done using the contact tip probe (available with PS-500 probe set) by making direct contact with the curcuit and then following the noisy trace to find the cause of emissions such as a broken transmission line or impedance mismatch.

A typical use for the H-field probe is to verify the integrity of the chassis of your computer. This is done by moving the probe along the seams of the chassis which may be acting as slot antennas. This probe is also very useful for detecting magnetic noise sources such as large current switching circuits or transformers.

By utilizing the appropriate probes, potential certification problems can be discovered and addressed before expensive compliance testing is done. This saves both money and valuable time. The net result is a reduction in testing costs and a decreased time to market.

Rev. D07.15

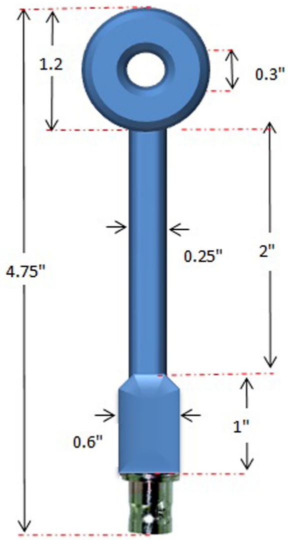
Specifications

Probe	**H-Field loop**	**Broadband**	**Fine Tip**
Frequency	9 kHz to 5 GHz	50 kHz to 5 GHz	100 kHz to 5 GHz
Type	H-field	E-field	E-field
Connector	BNC (f)	BNC (f)	BNC (f)
Dielectric breakdown	1 kV	1 kV	1 kV
DC input at the tip	N/A	N/A	N/A
Dimensions	see below	see below	see below
Weight	4 oz / 113 g	4 oz / 113 g	4 oz / 113 g

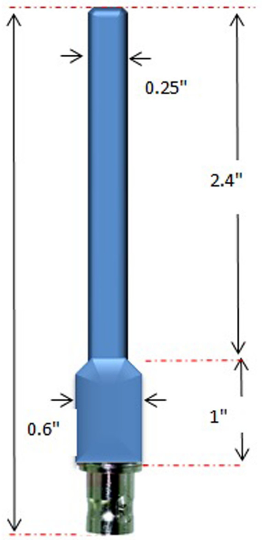
Optional Preamplifier

Model: PAP-501
Frequency Range: 10 MHz -1000 MHz
Nominal Gain: 21 dB ± 2
Pout @ 1 dB comp: + 10 dBm
Typical Noise Figure 6 dB
Output Impedance: 50 Ohm
I / O Connection: BNC (f) input, BNC (m) Output
Power Input: 6 VDC, 500 mA
Power input plug type: 2.1 (ID) x 5.5 (OD) center pin positve.
Weight: 1 lb. (0.45 kg)
Dimensions (L x W x H): 83 mm x 42 mm x 25 mm (3.27 " x 1.65" x 0.985")

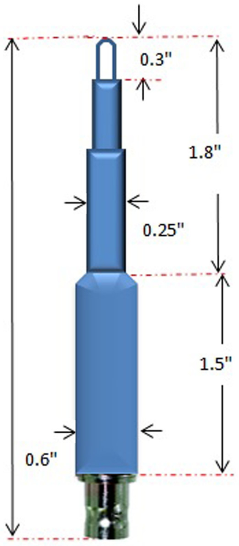
Mechanical Dimensions



H-Field Loop



Broadband



Fine Tip

U.S. Patent # 5,132,607
Dimensions are given in inches
All values are typical unless specified
Specification are subject to change without notice