

When measuring the output of a Power over Ethernet (POE) module it is important to remember that the oscilloscope can see a lot of high frequency common mode interference, this can overload the input amplifier and give false readings.

Also the ground lead of the oscilloscope probe must be kept close to the probe tip. With a large loop of ground wire magnetic pickup from stray field of the output inductor, will also give false readings.

Figure 1 shows an example of a modified oscilloscope probe that can be use for EMC measurements. It has ferrite common mode filters, large clip on type for low frequency and toroid for high frequency. The ground lead is wrapped around the probe tip to reduce magnetic pickup.

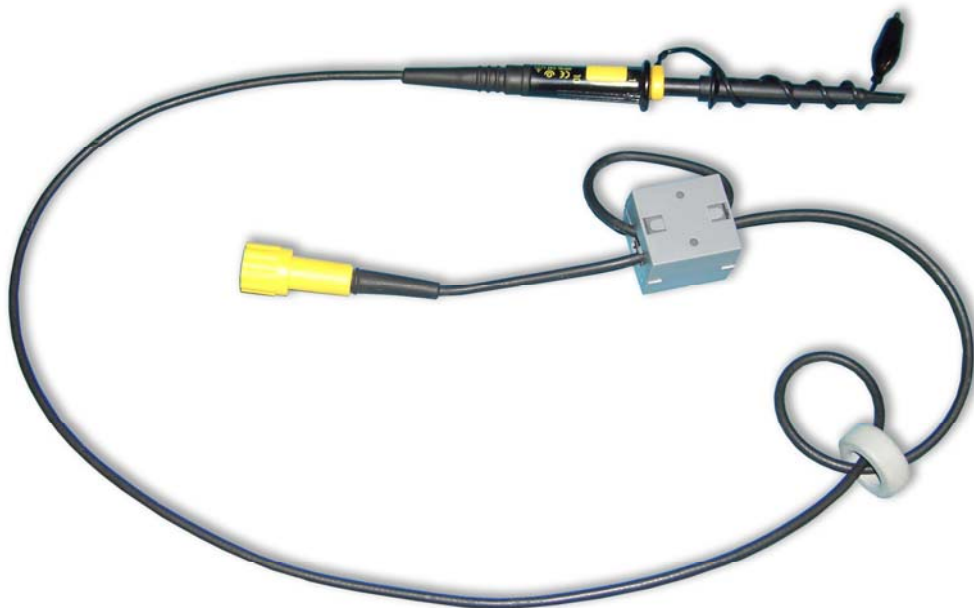


Figure 1: EMI Test Probe