



## Re: Differential probes

power supply in there to generate a negative supply, whereas the Tek just pulls clean power from the scope.

Ugh!

The problem with the Tek is it can only work with the scope. But I need to look at a filtered signal to get better RMS measurements of PWM BLDC motor terminal voltages.

Although the FLuke gave a little better 1MHz CMRR of about  $-66\text{dB}$  vs. Tek  $-49\text{dB}$ .

There are also a bunch of probes on the market that look like this:

<http://www.probemaster.com/activedifferential.html>

<http://www.linkinstruments.com/adf25.htm>

I wonder how they perform?

Oh well, just deliberating in public.

Thanks for input.

We just got a new Tek TPS2024 scope. It's a 4-channel, 200 MHz color scope and all four channels plus the trigger inputs are isolated. So you can use regular 1:1 or 10:1 probes for off-ground measurements at millivolt sensitivity. Slick.

The 50:1 attenuation of the P5205 turns low-level stuff to mush.

John

It won't have the CMRR of a true diff amp.

The TPS2024 is truly isolated to 600 volts RMS and goes down to 2 mv/cm, which is pretty extreme. It would be nice if it had the 10 uv/cm sensitivity and switchable bw of a 1A7A/7A22.

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Maybe I'll make a little battery-powered preamp box to front-end the 2024 and get down to microvolt levels; switchable bandwidth would be handy, too. It could be single-ended, since the scope provides the isolation.

Does anybody make male BNC connectors with plastic (insulated) connector shells?

John

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