

Re: Differential probes

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2006-06/msg04455.html>

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 - *Date:* Wed, 21 Jun 2006 09:27:19 +0200
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"John Larkin" <jjlarkin@xx> a écrit dans le message de news:oq7h9298fct69o6683rijcer3ne327somh@xxxxxxxxxxx

On 20 Jun 2006 15:53:10 GMT, Jim Yanik <jyanik@xxxxxxxx> wrote:

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

So what? That has nothing to do with differential amp performance.
All that means is the front ends are isolated from the case to 600 V.

Re: Differential probes

That sure sounds differential to me. And it sure lets me measure stuff that nothing else can.

almost differential.

You can surely count on unmatched input impedance.

It'll probably work ok on a low impedance circuit, but try to measure a diff voltage in a 10K impedance circuit. You might have some surprise.

The 7A13 has a wide input overdrive capability, has matched attenuators carefully calibrated for low CMRR, and a true low CMRR differential amplifier.

But it can't usefully look at signals on an opamp that's running 180 volts off ground, which is specifically why I bought the scope.

AFAIK, NONE of the TDS series were designed to have true differential capability, just the simple "invert&add Ch2" sort like the older analog scopes.

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.

Many of the TDS series have an adjustable BW-limit feature.

But clear down to 100 Hz would be nice. At 10 uV/div and 20 MHz bw, all I'd ever see would be radio stations.

I recently learned that the 7K plug-ins (only the vertical ones) work in my DSA601 scope.

Just cut the polarizing finger and voilà, the only "inconvenience" being that there's no dialog between the mainframe and the plug-in, so you have to manually inform the mainframe.

So I bought 2 7A22, and having them along with another 4 inputs plug-in in a 8 traces DSO is a very valuable debugging tool.

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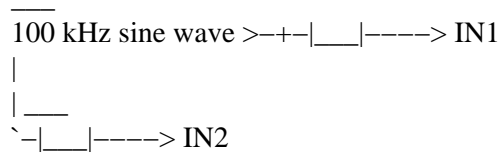
Maybe I'll make a little battery-powered preamp box to front-end the 2024 and get down to microvolt levels; switchable bandwidth would be handy, too. It could be single-ended, since the scope provides the isolation.

It still would make a lousy differential amp.

I don't want to play with words, I want to measure things.

Try this:

2x10 k matched



The asymmetrical impedances of a floating single ended probe will do wonders :-)

Of course, if in your case the 180V offset is DC or,only LF, then, no pb.

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Thanks,
Fred.