



Re: Photodiode TIA

reading the datasheet, the device has a bandwidth of 470MHz. Reading on it then states:

"In general, the bandwidth of a fiber optic preamplifier should be 0.6 to 1 times the data rate. Therefore, in a 622Mbps system, the bandwidth should be between 375MHz and 622MHz. Lower bandwidth causes pattern-dependent jitter and a lower signal-to-noise ratio, while higher bandwidth increases thermal noise."

Does this mean that the thermal noise would be large in my system if i used it for 160Mbps? Or is this not really an issue? I was going to use the Optek OPV480 and reverse bias to around 20V and feed it straight into this chip, or it is easier just to design my own transimpedance amp around a single opamp and feedback resistor and capacitor?

Thanks

Andrew

A lot depends on how much light you have. If it's microwatts, the noise budget will be tight. If it's in the milliwatt range, you'll probably overload the Maxim and might be better off making your own TIA. I've had good results using a current-mode opamp as a TIA when there's lots of light.

Re: Photodiode TIA

What's the capacitance of the OPV480?  
That's a serious issue at high  
speeds.

John

You forgot that Maxim only advertises stuff that is not  
available.

But they always have samples. A few months ago, in deep trouble, I had  
all my engineers and some outside friends and family request Maxim dac  
samples. Turns out you can get 18 samples of this dac per request if  
you play with the part number options. We got enough to get out of  
trouble.

John

Sure no way to run an airline.....

There have been threads on this. The engineering consensus seems to be  
"don't design with Maxim parts."

If I browse my parts/purchasing database, most of the Maxim parts have  
a note like "LONG LEAD!" or "10 WEEK LEADTIME" and occasionally  
"OBSOLETE NO SUB"

Maybe they cater to a small number of huge-quantity OEM customers or  
something.

John

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