

Re: How inaccurate is a 555 or 7555 REALLY?

## Re: How inaccurate is a 555 or 7555 REALLY?

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.design/2006-12/msg02034.html>

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- *From:* [bill.sloman@xxxxxxxx](mailto:bill.sloman@xxxxxxxx)
  - *Date:* 8 Dec 2006 23:02:13 -0800
- 

John Fields wrote:

On 8 Dec 2006 14:38:51 -0800, [bill.sloman@xxxxxxxx](mailto:bill.sloman@xxxxxxxx) wrote:

John Fields wrote:

On 5 Dec 2006 16:48:12 -0800, [bill.sloman@xxxxxxxx](mailto:bill.sloman@xxxxxxxx) wrote:

John Fields wrote:

On 4 Dec 2006 17:19:45  
-0800,  
[bill.sloman@xxxxxxxx](mailto:bill.sloman@xxxxxxxx)  
wrote:

John Fields  
wrote:

On  
3  
Dec  
2006  
15:10:27  
-0800,  
[bill.sloman@xxxxxxxx](mailto:bill.sloman@xxxxxxxx)  
wrote:

My  
own  
idea

Re: How inaccurate is a 555 or 7555 REALLY?

of  
my  
attitude  
on  
this  
news  
group  
is  
"polite  
until  
provoked"

---  
Which  
generally  
manifests  
itself  
as  
provocation  
=  
disagreement.  
---

but  
John  
Larkin  
does  
keep  
on  
finding  
insults  
in  
my  
posts  
that  
I  
could  
have  
sworn  
weren't  
there  
when  
I  
composed  
them  
(and  
don't  
look  
much

Re: How inaccurate is a 555 or 7555 REALLY?

like  
insults  
to  
me  
when  
I  
reread  
them).

----  
Which  
is  
about  
the  
double  
standard  
you  
exact.  
If,  
in  
fact,  
your  
posts  
are  
made  
without  
rancor,  
which  
is  
ridiculous  
on  
its  
face,  
you  
insist  
that  
what  
must  
then  
be  
"carelessness"  
on  
your  
part  
be  
not  
interpreted  
as  
insult,  
but

Re: How inaccurate is a 555 or 7555 REALLY?

that  
infinite  
care  
be  
taken  
with  
correspondence  
directed  
to  
you  
in  
order  
that  
you  
not  
interpret  
it  
as  
insult.  
----

Of course,  
if you could  
find an  
example  
where I was  
unreasonably  
easily  
provoked,  
or  
"accidentally"  
produced a  
grievous  
insult, you'd  
quote it,  
thus  
converting a  
pointless  
troll into  
something  
worth  
reading.

----  
Just because I can't be  
bothered to slog through the  
morass of your  
posting history in order to  
find an example of your

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nasty attitude  
certainly doesn't mean there  
aren't thousands of examples  
out there.  
---

Your search skills aren't exactly impressive,  
but the intelligent  
reader will still conclude that there are many  
fewer than thousands of  
examples out there, with the likeliest number  
being zero. Since I seem  
only to have cranked out 6520 postings over  
the past ten years, there  
is an upper limit to the examples that you  
could find.

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With a total of 6520 posts under your belt, I'd be willing to  
bet  
that at least one third of them contain slurs of one kind or  
another, consciously or unconsciously made since you just  
can't seem  
to help yourself.  
---

So quote a few. With 2173 to chose from, even you should be able to  
come up with a few examples.

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Nope. I'm the one willing to bet, so you're the one that has to  
prove me wrong.

Don't be silly. First you libel me, then you claim it is up to me to  
prove that your unsupported libel is false.

<snip>

Quite a lot. Try doing the system design for an electron beam  
microfabricator sometime,

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I'll see your electron beam microfabricator and raise you the system  
\_and\_ circuit design for an interferometer driven laser

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photolithographic pattern generator.

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You haven't raised the stakes at all – the electron beam microfabricator included a laser driven interferometric stage positioning system, and hardware to map arbitrarily scaled data defining the integrated circuit masks to be written onto the interferometer measurements. We did fall short of full generality by assuming that the wafer/mask to be written was within two degrees of being square to the interferometer designed grid, but our customers assured us that that was all the tolerance we needed.

Our electron beam provided better resolution than your photolithographic system ever could, and was doing write on the fly. I think you have just been comprehensively trumped.

or a stroboscopic electron microscope.

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That doesn't sound like such a big deal. What? a couple of detectors instead of just one, maybe two beams? Steering magnetics? Duck soup!

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Not if you want 0.5nsec wide stroboscopic pulses (which required an electrostatic beam-blanking system – albeit the boss would not spring for the wide-voltage range version on which I'm named as the inventor. Magnetic beam blanking is nice – we used it on the old EBMF 10.5 electron microfabricator – but it won't go sub-nanosecond nor anywhere near it.

In fact the interesting part of that system, which I first proposed in 1983 (too late to have qualified for a patent) was the "multiple flash per cycle" feature. We could keep track of up to 1024 phase points, and build up our waveform/image at the 25MHz sampling rate of the system (it should have been faster, but we started off with an unrealistic completion date which created a lot of problems) rather than the repeat cycle of the process we were following.

And we didn't need two detectors – a single relatively fast Everhart-Thornley detector above the final lens did everything we needed. The fast-focussed photo-multiplier tube did need a fast output amplifier, which incorporated an analog finite-impulse response filter built around a lumped constant delay line – a trick I've recycled a few times since then.

Great fun, but I don't know anybody who would describe it as "duck

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soup" once they understood what was going on.

Not a place for a 555-addict.

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You sure do seem to harp a lot on that anti-555 crap.

Too bad you were never successful in using it in any of your designs, (even though it's very easy to use) since if you had been you might actually appreciate Camenzind's genius.

It never did what I wanted done.

If nothing else,  
I think the use of the ratiometric voltage divider in order to largely eliminate variations in output timing WRT supply voltage and temperature variations was brilliant, as was the window detector placed at the  $1/3V_{cc}$  and  $2/3V_{cc}$  taps of the divider.

That isn't exactly genius. Anyone who can do enough calculus to find minimum sensitivity conditions can demonstrate the same genius on a wide variety of circuits. I spent a lot design time doing this on various resistor networks when I was younger and doing serious analog design.

Camenzind did come up with a great circuit for its time, but the combination of crummy timer and crummy saturating switch didn't have much to offer by 1974, when I might have used it, and has had even less appeal since (except to people who are bit slow to learn new tricks – when are you going to get into PLDs?).

YMMV, but I think you kind of begrudge him his success because you think you're ever so much smarter than he is and yet...

I don't begrudge Hans Camenzind his success. Try to find some evidence to support that daft allegation.

I've also got no reason to suppose that I'm smarter than Hans Camenzind, nor have I ever made any such ridiculous claim.

You don't seem to have a particular secure grasp of reality, do you.

--  
Bill Sloman, Nijmegen

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