

# Re: Transmission Gate question

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.basics/2006-01/msg01500.html>

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- *From:* "Anthony Fremont" <spam@xxxxxxxxxxxx>
  - *Date:* Tue, 31 Jan 2006 21:50:06 GMT
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<jwelser@xxxxxxxxxxxxxxxxxxxx> wrote in message  
[news:dro3gg\\$sa3\\$2@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:dro3gg$sa3$2@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)  
> Noway2 <no\_spam\_me2@xxxxxxxxxxxx> wrote:  
>  
> : Most text books focus too much on the  $I_d = k(V_{gs} - v_t)^2$  equation.  
> : Unless you are getting into semiconductor physics, this equation is  
> : probably about worthless. It may help for you to look at some  
product  
> : data sheets for fets and look at the curves relating on resistance  
> : versus the  $V_{ds}$  and  $V_{gs}$ .  
>  
> It's more a distinction between analog and digital circuits,  
> rather than semiconductor vs (? -- MOSFETs are semiconductors.)  
Devices  
> in CMOS digital circuits spend most of their time in either the cutoff  
or  
> the linear region, only passing through the saturation region (whose  
drain  
> current is roughly given by the equation you presented above) when  
they  
> are switching. On the other hand, most useful analog circuits involve  
> amplifiers, which rely on devices that exhibit the controlled  
> current-source behavior characteristic of the saturation region of  
> operation.

I think you mean "linear" where you say "saturation" and vice versa.

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- *References:*
  - ◆ ***Transmission Gate question***  
◇ *From:* Angmor
  - ◆ ***Re: Transmission Gate question***  
◇ *From:* Angmor
  - ◆ ***Re: Transmission Gate question***  
◇ *From:* Pooh Bear

Re: Transmission Gate question

◆ ***Re: Transmission Gate question***

◇ *From:* Noway2

◆ ***Re: Transmission Gate question***

◇ *From:* jwelser

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