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Subject: What is the input impedance of a 6sn7?

Posted by [Tre'](#) on Mon, 20 Mar 2006 01:33:53 GMT

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I mean the grid to ground impedance not the grid resistor. I assume this impedance is in series with the grid resistance. I have always considered a tube grid to be an open, aside from the interelectrode capacitance.....Tube cad says no. What I'm trying to do is install a high pass filter between the output of my preamp and the input of the power amp. Thanks...Tre'

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Subject: Re: What is the input impedance of a 6sn7?

Posted by [Damir](#) on Mon, 20 Mar 2006 13:20:41 GMT

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In normal operation (grid negative to cathode), input impedance of the 6SN7 triode (g1-ground) is close to infinity, or at least, very high. Then grid-leak resistor (say 220k from g1 to ground) is actually our input impedance (220k in parallel with  $\gg 220k = 220k$ ). We have the "problem" with input capacitance ( $C_{gk} + C_{strays} + C_{miller}$ ), say about 100pF for 6SN7. The easiest way with filter stages is to observe triode input like, say, 220k in parallel with 100pF.

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Subject: Re: What is the input impedance of a 6sn7?

Posted by [Tre'](#) on Mon, 20 Mar 2006 15:14:08 GMT

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Thanks Damir. I was reading TubeCad wrong. It's redundant. It states the F-3db point for a given circuit and then states the capacitance reactance in ohms as the  $Z_{in}$ . Knowing the source impedance and the F-3db point I can calculate the CR but the program gives it anyway. It just does not make it clear. Naz helped me with this. Thanks....Tre'

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