Subject: New JJ tesla 2A3-40
Posted by Norris Wilson on Sat, 11 Mar 2006 04:11:39 GMT
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Here is a new JJ 2A3 that can handle 40 watts and 450V.They are at the bottom end of steep pricing though, at $225 a matched pair.FYINorris
http://www.jj-electronic.sk/pdf/2A3.pdf

Subject: Re: New JJ tesla 2A3-40
Posted by Damir on Sat, 11 Mar 2006 05:55:49 GMT
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Nice - acc. to the curves, it`s a plug-in compatible with standard 2A3, but can be used in "hotter" OP for little more power.Did you see the new JJ KT77?

Subject: Re: New JJ tesla 2A3-40
Posted by Norris Wilson on Sat, 11 Mar 2006 15:02:14 GMT
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Hi Damir,I hope the new 2A3-40 can get enough power from a PP amplifier to alleviate foregoing the search for another output tube for more power. The amplifier that Douglas was working on might be a good PP design for a set of these tubes.Possibly the 300B SET circuit that you are perfecting could be a good candidate for utilizing the 2A3-40 if so desired?How much power do you feel is obtainable from these new JJ 2A3-40's?I did see the KT-77, it looks good to me. I have been trying to talk a freind of mine into trying a set in his Eastern Electric M520.But, he is set on trying the Mullard clone EL34 from Russia first.Let us know about these JJ 2A3 tubes if you get the chance to try any? They look like a possible high quality alternative to the Full Music 2A3's. They are priced about the same.Norris

Subject: Re: New JJ tesla 2A3-40
Posted by Damir on Sat, 11 Mar 2006 16:23:42 GMT
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If used "300B area" OP, for example, 350V/-66V/75mA, it can produce "typical" 300B power, about 7W or so with Ra~3k load - it`s a probably interesting for PP. With Raa=6k we can expect, say, 14-15W in class A.If we use more "modest" and linear OP for SE, for example 300V/75mA/-54V and use Ra = Ug*μ/Ia - rp = 54*4,2/0,075 - 700 ~ 2,5 kOhms ("standard" 2A3

value), we can expect anode voltage Ua=μ*Ug/(1+rp/Ra)= 177Vp = 125Vrms. On the anode load, Ra, it produces Pa=Ua^2/Ra = 6,25W.If we have about 10% (OPT) losses, we can expect about 5,6W output, larger then "typical" 3,5W from standard 2A3.I tried something similar with 300B I`m experimenting. I used 760-780V ct secondary, CLCLCLC filter/AZ50 rectifier, B+ is about 440V, few V less for the driver. When I disconnected the first cap, I get L-input supply, and B+ is about 312V - exactly what we need for 2A3. We have about 12V voltage drop through the Rw of the primary (OPT), and need Uak=250V through the tube, Uk=45V.I didn` bother to try 6B4G (I have a few, but no 2A3), I just left 300B in place - it "biased" about -51V, with 250V/56mA through the tube, Rk~900 Ohms.E180F trioded driver gets about 310V - enough for CCS driver "work" (Ua=200V). The sound was very good, but with less "slam" - I have 89dB/W speakers :-(.When I`ll finish this 300B amp, I`ll probably post about little changes needed to "convert" it in 2A3 amp, with "traditional" OP, 250V/45V/60mA.

Subject: Re: New JJ tesla 2A3-40
Posted by Norris Wilson on Sat, 11 Mar 2006 21:41:34 GMT
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That all sounds great Damir.Myself, and probably many others here are looking forward to you completing your amplifier. To include posting the results and schematic for us to try.Thanks for the detailed information and breakdown in your post, very informative indeed.Norris

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Subject: Re: New JJ tesla 2A3-40
Posted by PakProtector on Sat, 11 Mar 2006 23:05:06 GMT
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Hey-Hey!!!,While I like the idea of a hot-rod 2A3, it seems to me there must be adjustments made to match the original so well.What if it had a 4A filament instead, and maybe 30% more gm? Let's keep mu the same, or perhaps raise it to 5 or so. R_p would be a bit lower and it would probably have a bit more grid-anode capacitance...oh well, nothing is free.For me, that's just too expensive a tube to play with. Sovtek 2A3 is maybe 75% of that one, at less than a third the price(and I know that they sound good).cheers,Douglas

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Subject: Re: New JJ tesla 2A3-40
Posted by Norris Wilson on Sun, 12 Mar 2006 00:31:38 GMT
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Hi Douglas,I agree with your comment that there is no free lunch.The single plate 2A3 Sovtek and the Shuguang single plate 2A3C can be purchased for $120 a matched quad, about 27% of the

price of the JJ's.I think $450 for a quad of JJ Tesla 2A3-40's is a pretty steep price of admission.Possibly they would be a better choice sonically over the 300B for a SET amplifier. But, with my bank roll, I will be doing good to get some Sovtek's.ThanksNorris

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Subject: Re: New JJ tesla 2A3-40
Posted by PakProtector on Sun, 12 Mar 2006 00:53:00 GMT
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Hey-Hey!!!,Just remember, it is easy to question something like this super 2A3. I'd rather see a valve that doesn't have to ride on any other valve's use. Perhaps one which could be sub'd with minimal or no fuss...but one that enough different to require another name.A 40W 2A3 is the 300B, but with lower voltage filament. This bigger tube should have a bigger filament, perhaps even a thoriated one...:) Imagine a 2A3-ish that glowed yellow/white like an 845, all at 2.5 V. Now that would be one HD filament, no?cheers,Douglas

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Subject: Re: New JJ tesla 2A3-40
Posted by Norris Wilson on Sun, 12 Mar 2006 01:37:17 GMT
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"Imagine a 2A3-ish that glowed yellow/white like an 845, all at 2.5 V. Now that would be one HD filament, no?"That would be cool.But, an 845 would probably be better over all.Building a higher current tube on the heels of the 2A3 is more about maketing. The KR and VV varieties of the 300B comes to mind. Obviously, the 2A3 is a highly coveted tube that has been produced for close to 70 years. Just imagine all of the 2A3 amplifiers in service over the years. Also, there is a group of the people who want the power of a 300B, but prefer the sonic flavor of the 2A3.So, why not give it to them, build a modified 300B into a 2A3, right.There is always a ready made market of audio enthusiast looking for something better.I am guilty in the persuit of catching my tail. Some times I can get pretty dizzy. Norris

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