

## Re: Selenium rectifier question

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- *From:* EricM <ew\_morr@xxxxxxxxxxxx>
  - *Date:* Tue, 15 Apr 2008 13:56:58 -0700 (PDT)
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On Apr 14, 9:27 am, "David" <some...@xxxxxxxxxxxxxxxx> wrote:

I also forgot to mention that the unit in question was originally 6 – 1 inch square pieces in the stack, but only two connections. The other unit that I replaced with the 10A 600V units was four pieces about 1 1/8" (or just slightly larger) square, but had three connections. This particular unit was on the 15V side of the supply (filament supply for several 12 volt filament tubes) and the 600V 10A silicon seem to work fine. The other part of the supply circuit – the 600V plate supply – is where I used one of the 600V 10A jobs to replace the 6–stack 1" square two–lead unit. Smaller but more in the stack must have equaled more PIV handling than the 600V 10A silicon I put where it was (with no dropping resistor). Don't know why it's so hard to find info on these older rectifier units. They hadn't gone bad either, I'm just replacing them to prevent filling the cutting room with toxic stink if they should decide to fail...

I admit I am very confused at this point. The three leaded rectifier was actually two selenium diodes with a common cathode or anode. Your replacement here should work fine but check the filament voltage since it will be higher than before by one or two volts. 12.6 volt tubes will not like 14 volts over a long time period.

There is no way a single 6 plate (stack) selenium rectifier

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can be a half wave rectifier for a 600 volt supply. Each rectifier plate can withstand only about 50 reverse volts and as others have said, you need at least three times that for a PIV rating.

David

Here's a link to the schematic; after replacing CR1 and CR2A/B with 10 amp 600 V silicon diodes, when the relay closes to enable the 600V plate voltage, the main power fuse F1 blows. I'm not sure I need dropping resistors, because the output voltage on the 12.6 and -38 terminals is very close to what it should be. Is there something I'm missing? <http://img410.imageshack.us/img410/4691/1567pscb9.jpg>  
Thanks.

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