Re: Relay Arc Supression Circuit

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The 3.3 is my punt plan for the current artwork or to populate a 0 ohm resistor where the zener is.

Here's what I'm not understanding...with the 5.1 zener and per my o'scope, it appears the worst case reverse bias on the LED is 7.5 as I aforementioned and I see about 3V across the series resistor, Rs. So this sums to ~10.5 Vdc. So does the 5V rail + 5.1 (zener) + 0.7 (diode) create a voltage of about 10.8 reverse bias? This seems wrong to me as the 5V rail is fixed but empirically the 10.5 is close to the 10.8. So, in my stupidity, I changed the value of Rs (reduced it as I could afford to have more current run through the LED in normal operation) but duh, the I−V charactereistics of the LED in reverse bias pretty much fix the voltage drop across Rs. So I think your statment about 5.1 + the diode drop at worst current must be what is yielding the ~10.5 Vdc I see across the LED and Rs. Is that correct? Will the diode/zener deviate that much from the nominal 5.1 + 0.7? Also, in your experience, if this relay swithces slowly, would a diode by itself be adeuqate? It only runs the coild of an offboard realy and is switching 24AC to this other realy. I know some of these are basic questions but I appreciate your input.

Thanks again for your time.

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