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Joined Jan 22, 2008 Messages 53,957 Helped 14,831 Reputation 29,959 Reaction score 14,526 Trophy points 1,393 Location Bochum, Germany Activity points 304,757 The original circuit at simple-circuit.com drives a 12 V BLDC. Not clear if necessary modifications for high voltage have been applied. Would be helpful to see a photo of the HV power stage. Possible issues - too large gate resistors - missing DC link bypass capacitors - crosstalk of output stage noise causes false switching - no overcurrent sense (may be necessary depending on BLDC winding resistance) Joined Apr 17, 2014 Messages 26,848 Helped 4,941 Reputation 9,903 Reaction score 5,908 Trophy points 1,393 Activity points 181,092 In addition to what FvM wrote: * slow diodes for bootstrap * slow electrolytics capacitors for bypass and bootstrap Seeing these issues in the schematic ... I also expect similar issues with PCB layout. Everything regarding half bridge circuits and BLDC driving ... has been discussed hundred times before. MOSFET manufacturers as well as MOSFET_driver manufacturer provide hundreds of application notes how to do it correctly. All say about the same ... thus it's not necessary to look for a specific one. Use these documents. Don't rely on random internet source. Klaus Joined Dec 30, 2024 Messages 8 Helped 0 Reputation 0 Reaction score 0 Trophy points 1 Activity points 84 Vậy tại sao bạn lại cho chúng tôi xem 1N4007? I originally used those components, then I changed them but i haven't modified the schematic yet Why do you show us a 1N4007? I originally used those components. Then I changed them but i haven't modified the schematic yet did you try: "half bridge circuits and BLDC" i tried but there is not much specific data about them. I am looking for a simpler and more concise driver, TPD4164K by TOSHIBA Joined Apr 17, 2014 Messages 26,848 Helped 4,941 Reputation 9,903 Reaction score 5,908 Trophy points 1,393 Activity points 181,092 originally used those components. Then I changed them but i haven't modified the schematic yet For your own benefit I recommend not to post schematics that does not match your real circuit. Indeed for me who wants to help it often is a waste of time.. causing misunderstandings.. and thus is annoying somehow. tried but there is not much specific data about them. I am looking for a simpler and more concise driver, TPD4164K by TOSHIBA I did not ask to look for a different circuit / different components. I rather recommend to use the ones you have correctly. The manufacturer provides all informations you need. Even in this forum Ir21xx problems are the most often discussed problems. It seems all posters make the same mistakes.. thus the answers are the same, too. I guess I repeated the solutions more than 50 times .. but many posters don't spend time for a search .. they all expect "personal treatment". To me it feels as the posters expect the "helpers" to spend the time they don't want to spend. They act as if their time is more worth than ours. Don't get me wrong .. but having repeated it 50 times is enough. Klaus Joined Dec 30, 2024 Messages 8 Helped 0 Reputation 0 Reaction score 0 Trophy points 1 Activity points 84 Joined Apr 17, 2014 Messages 26,848 Helped 4,941 Reputation 9,903 Reaction score 5,908 Trophy points 1,393 Activity points 181,092 Hi, your application involves high speed switching (steep edges = high frequency components) of rather high voltage and rather high current. This needs a lot of school and experience .. to understand the effects of high frequency and how they influence other parts and signals, overall stability and end product reliabilty and lifetime. This is not an easy job .. nothing for beginners. Many tinkerers will fail. Many tinkerers report they got it working ... but also that it failed to operate after some time (sometimes causing explosion an fire). Almost none of them cares about safety regulations (Example: They think the use of an optocoupler is sufficient for isolation, but they don´t understand the concept of clearance and creepage distances .. and that they vary with voltage, pollution grade, altitude, use case .. and so on) Almost none of them cares about EMI/EMC regulations .. Making them illegal to be used. --> If I - as a professional - would sell the circuits they built ... I had a good chance to go to jail ... sooner or later Klaus Joined Oct 16, 2010 Messages 12 Helped 0 Reputation 0 Reaction score 0 Trophy points 1,281 Activity points 1,364 I am doing a transient simulation for a sigma delta modulator and the simulation time required to complete is quite long. I have come across the "accelerated parallel simulation" option in cadence that could speed up the simulation but i am not aware of the process of setting up that option. I would appreciate some guidance on setting up APS or preferably, a step-by-step tutorial also any other suggestions for speeding up the simulation is most welcome. My spectre version is: 5.10.41.500.6.137 Thank You. Joined Mar 4, 2008 Messages 9,728 Helped 2,347 Reputation 4,720 Reaction score 2,699 Trophy points 1,393 Location USA Activity points 76,723 Read the fine print about UltraSim and APS - they are very greedy as far as number of licenses they take. If you want to fix solution time, consider using hierarchy editor and controlling the switch-views to use veriloga models for all gates not in the critical path. Assuming you have those views and acceptable realism in them. You do not need every node of a do-nothing holding register solved at every timepoint, which a transistor level simulation will do whether it's needed or not. Joined Apr 17, 2014 Messages 26,848 Helped 4,941 Reputation 9,903 Reaction score 5,908 Trophy points 0 Activity points 181,092 Hi, Can you give some informations about the signal and it´s requirements. ("High speed" isn´t very informative) * frequency * waveform * allowed different signal length / different phase ... and what ever is important for your information. Klaus Joined Jun 4, 2025 Messages 6 Helped 0 Reputation 0 Reaction score 0 Trophy points 1 Activity points 85 Hi, Can you give some informations about the signal and it´s requirements. ("High speed" isn´t very informative) * frequency * waveform * allowed different signal length / different phase ... and what ever is important for your information. Klaus MIPI CSI 2 C phy 5ghz and above We can't exactly say nrz but it's a kind of