

APPLICATION NOTE 3614

Staggering the Burst Dimmer on CCFL Displays

Abstract: To reduce the instantaneous current demand on the DC inverter power supply, the DS3984/DS3988 cold-cathode fluorescent lamp controllers stagger the start of the burst dimming cycle for each of the channels of a backlit LCD display.

Figure 1 shows the delay of channels 1 through 4 staggered by the DS3984/DS3988 cold-cathode fluorescent lamp controllers. The other channels are staggered in a similar fashion by using the DS3988 for up to 8 channels, or by cascading multiple DS3984/DS3988 controllers for applications requiring additional channels.

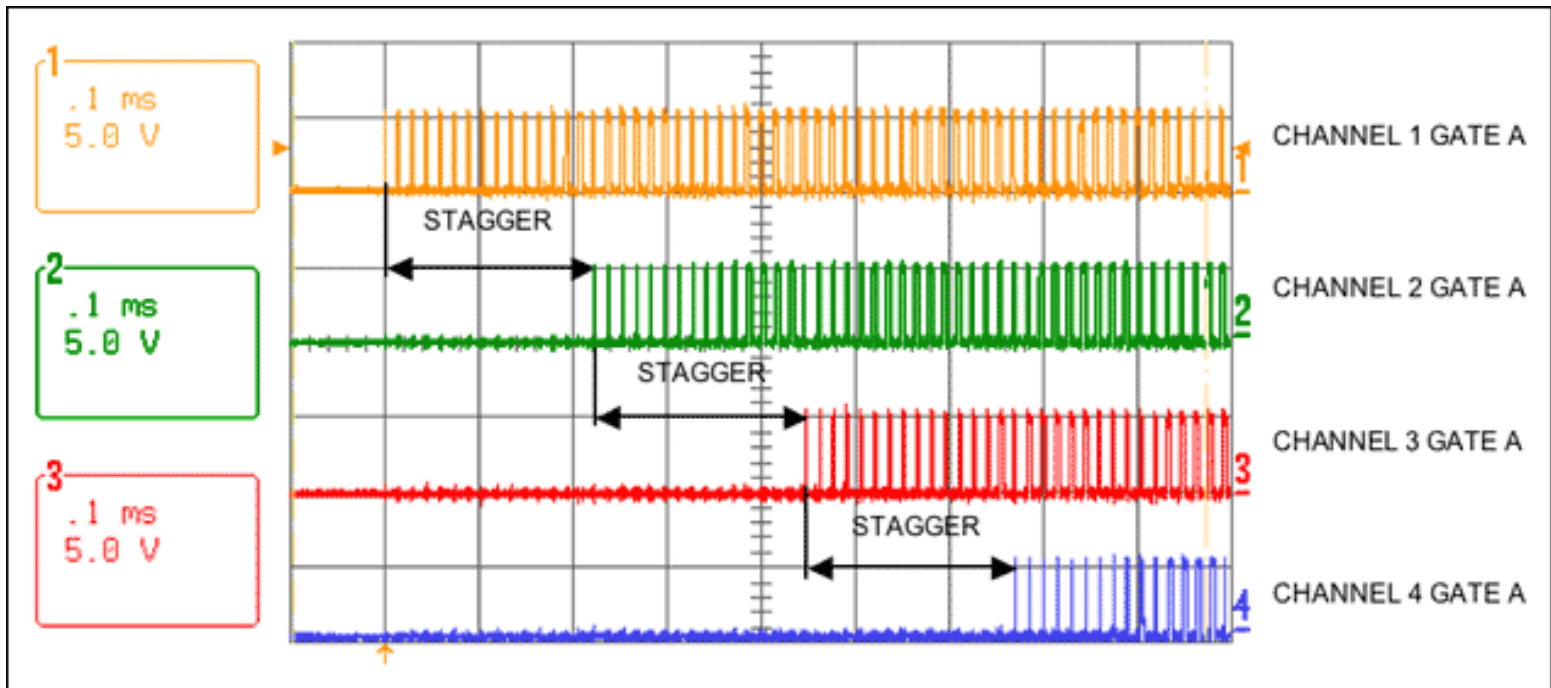


Figure 1. DS3984/DS3988 staggered burst dimming delay on channels 1 to 4.

Figure 2 shows the effect the staggered delay has on the current demand of the DC-inverter power supply. In this example, the burst dimming is set to approximately 50%. The power supply slowly ramps up to just over 3A, and then slowly returns to 0A.

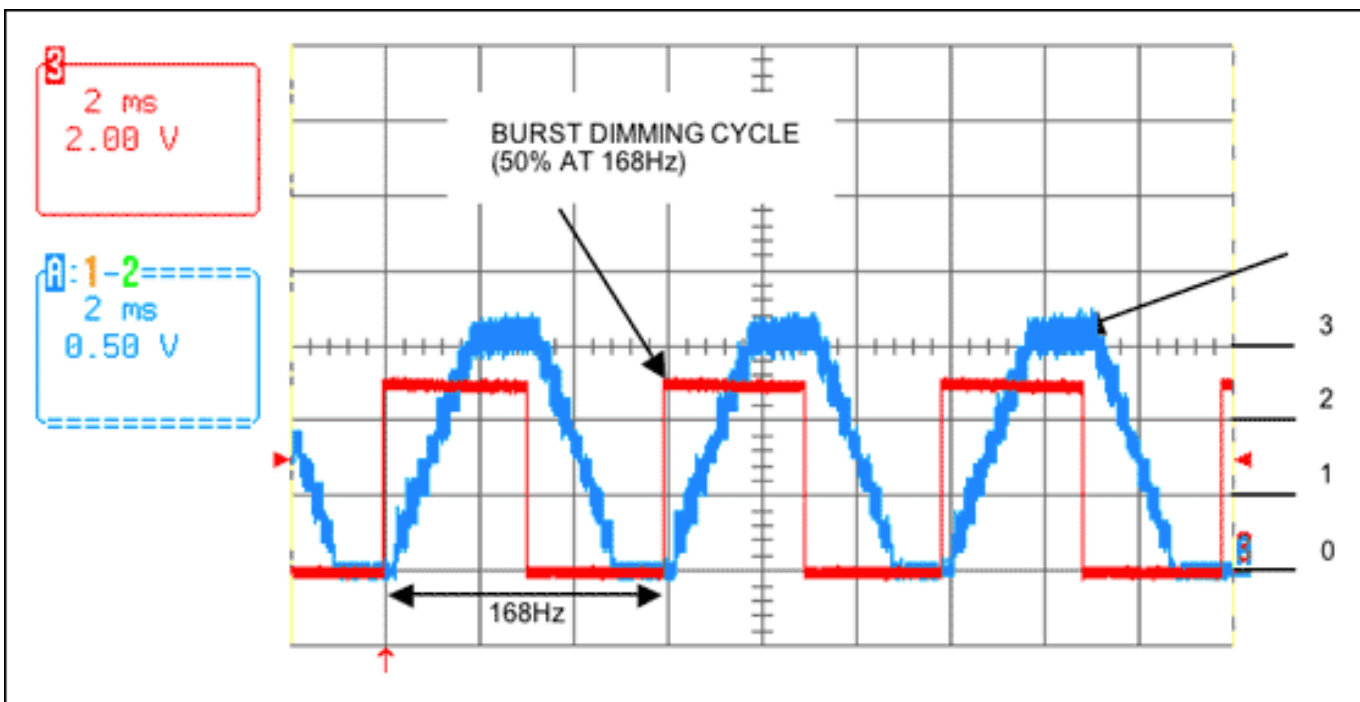


Figure 2. DC inverter supply current ramp at 50% burst dimming.

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Related Parts

DS3984: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

DS3988: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

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