

Chiarimenti (Clarifications)

Lista (List) #12

Chiarimento (Clarification) #12.1

Domanda (Question):

With reference to the Technical Specification of the VS-PS, the requirement “Maximum output voltage ripple $\pm 4\%$ ” reported in Table 2, seems to conflict with the requirement “Transfer function from requested to applied voltage” with Delay $\leq 50 \mu\text{s}$, Time constant $\leq 50 \mu\text{s}$ (see § 4.6), due to the high dynamic performances requested to follow the current reference reported in Figure 4. Could you please comment?

Risposta (Answer):

As described in the Technical Specifications, the main function of the VS power supply system will consist in fast controls. Therefore, the dynamic response is the most important performance of the VS system.

The reduction of the output voltage ripple could need an output filter that could affect also the dynamic response. For this reason, a higher voltage ripple is acceptable if it allows a faster dynamic response.

Accordingly, if the system is designed to achieve a Delay $< 50 \mu\text{s}$ and a time constant $< 50 \mu\text{s}$, there is no requirement on the output voltage ripple.