

Note No.	SVC-FSB-0031
Release Date	4/3/2017
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# First Pulse Suppression Testing Procedure

## Summary

This technical note describes the setup and testing of the First Pulse Suppression (FPS) feature of the eDrive.

## Scope

This technical note applies to all 2U and 4U eDrives.

## Materials and Equipment

- SRS Signal Generator
- Oscilloscope
- Pulse Detector
- BNC cables and BNC T adaptor

## Programming Instructions

1. Set SRS channel B=A+ to 50ms delay, internal trigger at a rate of 10 Hz, and High Impedance.

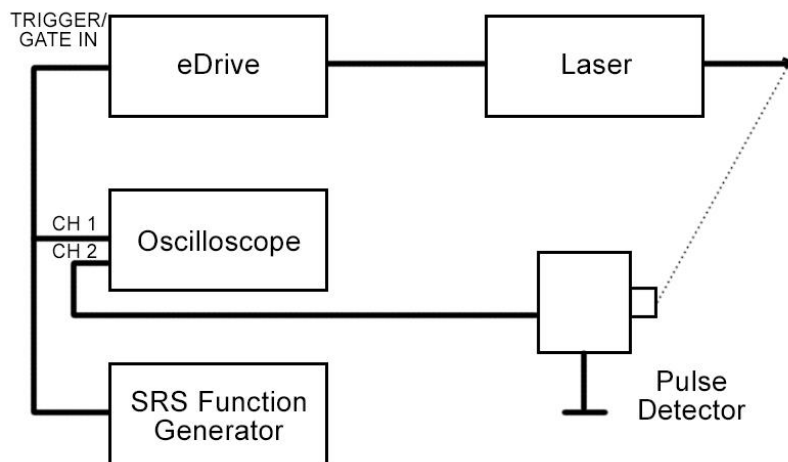


Figure 1: FPS Test Setup

2. Plug SRS into eDrive Trigger/Gate In (see Figure 1 above).
3. Place a T on the SRS channel and run the other lead to channel 2 on the oscilloscope. Trigger off channel 2. Channel 2 setting should be 1.0V.
4. Set oscilloscope Acquisition mode to **peak detect**.

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5. Connect oscilloscope Channel 1 to the **pulse detector**.
6. Channel 1 on the oscilloscope will display the optical pulse. Set channel to 200mV and 200μs.
7. Turn on laser and switch the eDrive to External Gate mode. Press the eDrive EMISSION button to fire laser. The laser should be pulsing at 10Hz.
8. Look at pulses on the oscilloscope, and adjust the eDrive FPS starting power and FPS window length settings until the first pulse is suppressed and is similar to the second pulse. Without FPS there is typically a giant first pulse as shown in Figure 2. Good FPS is shown in Figure 3.

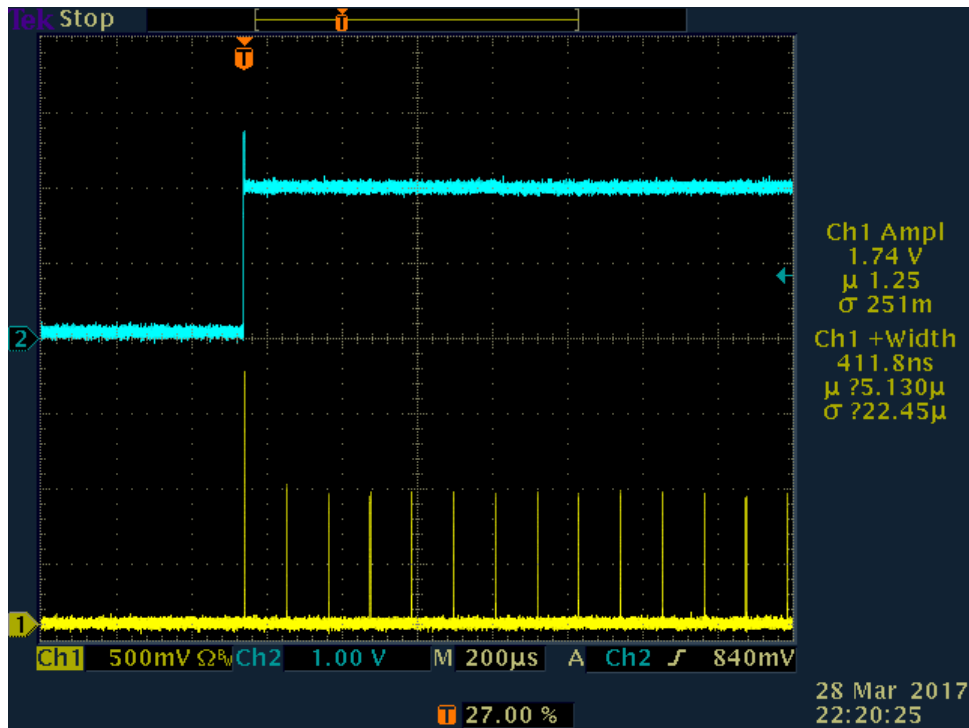


Figure 2: Example of a Bad FPS (Giant First Pulse)

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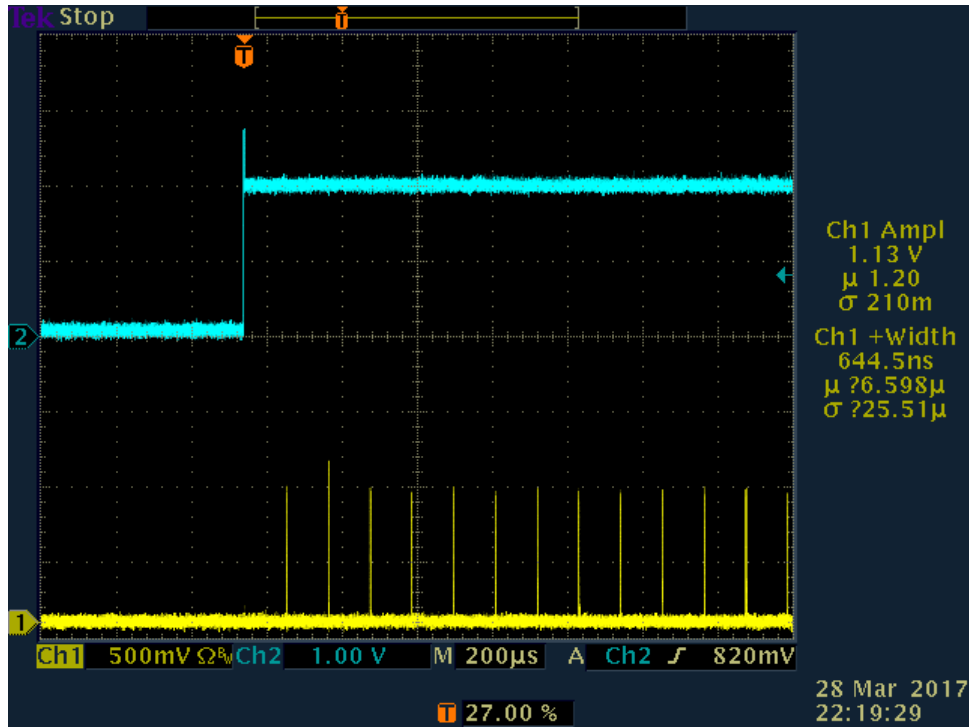


Figure 3: Example of a Good FPS